

**EVALUATING ACCESS AND USE OF COMMUNITY INFORMATION
SERVICES BY INFORMAL URBAN SETTLERS IN NAIROBI COUNTY: THE
CASE OF KIBERA SLUMS**

BY

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ELDORET

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DECLARATION

DECLARATION BY THE CANDIDATE:

This thesis is my original work and has not been previously published or submitted for a degree or other qualification in any other university. All the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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This thesis has been submitted with our approval as university supervisors.

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DEDICATION

To my family – you are forever invaluable.

ABSTRACT

Access and use to the right kind of information and possession of correct and relevant information resolves various problems faced by individuals in the slum and also helps them in decision making. Limited access to the right information at the right time deprives the slum dwellers the right to development. The information needs of the slum dwellers are not adequately identified and therefore the limited information resources they access and use are usually based on the assumption of information provided, through the public, from among themselves, NGOs, CBOs, the churches and the private sector. Therefore the aim of the study was to evaluate access and use of community information services to Kibera slum dwellers and to suggest the ways in which these services could be enhanced. The research objectives were to: identify the information needs of slum dwellers in Kibera; examine Information seeking habits of the slum dwellers in Kibera; assess the existing information resources and services; establish the extent to which information resources and services meet user needs ; identify the format in which information is repackaged ; find out Challenges faced by accessing and using of information and suggest how access of information services by slum dwellers can be enhanced. The study was guided by Niedzwiedzka's Information behaviour model and Wilson information behaviour model .The research was qualitative in nature and adopted survey research design. The target population was 71,000 from five Kibera slum villages. The study sample size was determined using Krejcie and Morgan sampling table to get a representative sample from each of the village.52 respondents were purposively sampled for a focus-group discussion and five key informants were purposively sampled and interviewed. The data was analyzed by organizing it into themes from which generalizations were made. The major findings of the study were that Kibera slum dwellers faced various challenges which include high cost of information materials,Poor knowledge of existing information resources, poor marketing of information, lack of internet access, distance, language barrier, inadequate and outdated information sources that inhibited effective access and use of information. Recommendations were that the Kenya National Library service Kibera branch and other resource centres within Kibera should carry out information needs assessment ,re-examine the existing information sources and system and decide whether it is necessary to redesign and adjust them to correspond to information needs of the slum dwellers then they market the library services, improve internet connectivity and repackage information in relation to the information needs of the slum dwellers.The information officers within Kibera should be more innovative and think of ways to encourage slum dwellers access information for example the use of mobile libraries ,kindles or other appropriate devices to different villages and this could be part of the library's regular outreach service.

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LIST OF ABBREVIATIONS AND ACRONYMS

CBOs	Community Based Organizations
CAS	Current Awareness Service
CD-ROM	Compact Disk – Read Only Memory
CFK	Carolina For Kibera
CI	Community Information
FDGs	Focus Group discussions
ICTs	Information Communication Technologies
NGOs	Non-Governmental Organizations
PDA	Personal Digital Assistant
SDI	Selective Dissemination of Information
SHOFCO	Shining Hope for the community

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Information is indispensable in any organization. Factors of production have been traditionally considered to be natural, human and capital resources. But as the world went through the four economic eras namely the agricultural economy, the industrial economy, service economy and now the information economy, information is now considered the fourth factor of production.

The information economy is present when majority of the income-earning activities in a society depend on the use of accurate, up-to-date information. Businesses (people) want instant access to accurate information and also want to transmit the information rapidly through telephone, computer etc. To be successful, an organization must have accurate and timely information about things like availability, location and quality of the factors of production it uses. Various ICTs such as computers, satellites and other new communication devices are now widely used in business to provide more and better quality information (Graf 1990).

Prasher (1991) supports the above by saying that “the supply of correct and precise information in time helps the policy-makers in making maximum use of the available resources as also in avoiding duplication of work”. He goes further to say that research and development programmes can be accomplished successfully only if the required information is available as and when required.

Community Information is the information for the survival and growth of the community or it is that information which is required by a member of the community to make effective use of the available resources around them. Thus community information is that information which helps to solve their day to day problems related to survival such as health, education, housing, legal protection, sound economic development, political rights and also to participate in social, political, cultural, legal and economic progress of the society either individually or collectively. The information service through which community information is provided to communities is called Community Information Service.

Information is so essential that it has become part of every human being. All human beings have information need, either individual or collective. And it is information transfer and information revolution through which cultural change; socioeconomic development of a nation is possible. Information is that basic need of life, which helps in the proper fulfillment of other needs such as food shelter etc. for its survival and growth. Hence it can be rightly said that without information, survival and development of any community is not possible. Therefore it is the basic responsibility of any welfare government to provide information services to communities. But in Kibera settlement scheme, this important task of providing Community Information Service is performed by many governmental, non-governmental voluntary organizations in their own way. There is no single agency to collect, reorganize and disseminate community information in a suitable form as per the requirement of different communities. In this context, Public libraries, being the library of communities can play important role in providing effective Community Information Services. These are the only institutions entrusted with the

duties of providing right information to right users at right time; thereby help people to deal with daily problem solving or in improving the quality of their lives.

1.2 Background to the Study

1.2.1 Informal Settlement Schemes in Nairobi

Kenya's capital city, Nairobi, is an international, regional, national and local hub for commerce, transport, regional cooperation and economic development. It connects together eastern, central and southern African countries. Nairobi is the most populous city in East Africa, with an estimated urban population of between 3.5 and 4 million. Slum in Nairobi are generally of two types, namely squatter settlements and those that arise out of illegal subdivision of either government or private land. A number of slums are located on land unsuitable for construction especially of residential housing. Informal settlement is widely located across the city. However, their location has largely been defined by their proximity to areas where their residents are able to get employment, for example, Kibera and Mukuru that are some of the largest slums with access to the industrial area. Most slum dwellers walk to work in the morning to the industrial area and nearby sources of employment. Slums accommodate the majority of the city population. They have high densities compared to both middle and high-income residential areas. The growth of slums in Nairobi has resulted from a variety of factors, historical and contemporary in nature. Olima (2001) has argued that: "the forces that have contributed to urban spatial segregation in Nairobi are many and varied. Some are legal and economic whereas others are cultural." During the colonial period, the people of Kenya witnessed a large-scale government sanctioned spatial segregation based on race and reinforced by planning laws

as well as exclusionary zoning regulations. The segregation/division along racial lines divided the city into four distinct sectors; North and East defined as the Asian Sector (Parklands, Pangani and Eastleigh); East and South East defined as the African Sector (Pumwani, Kariokor, Donholm) enclave before it was bounded by the Game Park (Nairobi South, Nairobi West). Finally, the line North and West marked the European area. Syagga et al. (2001) points out that the forces of rural–urban migration and income differentials between the rural and urban areas, as well as within urban areas have contributed to the growth of slums in Nairobi. Other factors include unemployment and underemployment, and increased population densities in the rural areas that have forced especially the young to move to urban areas. Informal settlement scheme in Nairobi include Mukuru Slum, Mathare Slum and Kibera Slum.

a) Kibera Slums

Kibera occupies 2.5 square Kilometers and is southwest of Nairobi about 5km from the city centre, Nairobi dam to the south and it is the largest slum in Nairobi, and the second largest urban slum in Africa. Kibera settlement is located on two Nairobi divisional administrative areas; Dagoreti and Lang’ata divisions. The slum is divided into nine villages which include Lindi, Soweto(East and West), Makina, Kianda, Mashimoni, Gatuikira, Kisumu Ndogo, Lainisaba and Siranga

i) Origin and Development

Kibera originated in 1912 and is a Nubian word meaning jungle or forest. It originally was a Nubian soldiers’ settlement in a forest outside Nairobi. The plots were awarded to the soldiers as a reward for their service in the World War 1 by the British colonial

government. The British government then allowed the Kibera settlement to escalate and mushroomed to the today Kibera slum by allowing in other tribes. Most of its inhabitants being individuals who come from the Kenyan country side to look for jobs in Nairobi city and due to the meager wages they get they end up having Kibera as their permanent residence. After Kenyan independence in 1963, however, various forms of housing were made illegal by the government, rendering Kibera unauthorized on the basis of land tenure. Essentially, since the early 1970s landlords have rented out their property to a significantly greater number of tenants than legality permits. Since the tenants, who are extremely poor, are unable to obtain or rent land that is “legal” according to the Kenyan government, the slum-dwellers find the rates offered to be comparatively affordable. Kibera slum is among the largest slums in Nairobi and is the second largest slum in Africa after Soweto in South Africa. It is an over populated slum while poverty, poor health conditions, lack of basic services are the order of the day. In Kibera, there are inadequate or failing formal structures for social services planning, management and implementation. It is a city within a city, complete with its own districts, services, schools, churches, shopping areas, medical clinics and bus stations. Kibera has residents coming from all the major ethnic backgrounds with some areas being specifically dominated by one tribe (eg. Kisumu Ndogo that is predominantly Luo). This multi-ethnic nature coupled with the tribalism of Kenyan politics has led Kibera to be the site of small ethnic conflicts throughout its near 100 year history; most recently in 2002 in which many resident’s homes were attacked by arson as well as the predominant 2007/8 post-election violence that saw many people lose their lives, injured and lose homes.

ii) Statistics Population

Government statistics on the 2009 Kenya Population and Housing Census reported Kibera's population as 180,326. The Kibera slum was previously thought to be one of the biggest informal urban settlements in the world. The statistics of each 9 villages include Makina 31,602, Soweto East 23,566, Gatuikira 23,053, Lindi 18,666, Kianda 17,356, Kisumu Ndogo, 16,437, Siranga 15,569, Laini Saba 11,342 and Soweto West 10,360.

1.2.2. Information and Resource Centres within Kibera

i) Kenya National Library Service Kibera Branch

It is one of the 60 branches of KNLS network in Kenya. The library is situated in one of the most densely populated informal settlement areas in Nairobi and was opened in the year 2012. The library provides the following services: tablet hour program, registration of members, lending, user education, outreach to primary schools, special programs i.e. mentorship for pupils, tinga-tinga services, talent shows, language programs through book clubs, tablet clubs, storytelling sessions, debates, spelling bees, public speaking, and reading culture promotional workshops to teachers, students and the community.

The library provides a cohesiveness programme using tablets and computers. The programme branded as 'Kibera Library Peace Ambassadors' was started after 2012/2013 elections to promote long lasting peace and harmonious co-existence. This library chose to use children and youth through educative approach since they are the next generation. The initiation of the program was inspired by the need to promote peace after dissatisfaction that arose after the general elections. Children and youth are always caught in the middle since under most they are not involved in the voting exercise. The

literacy levels in the slum are low, a factor that has led to many youth being involved in crime. The peace initiative aims at contributing towards reduction in the rate of violence and crimes through training youth on how to use tablets and computers. The library has played a big role in promoting cohesiveness within the slum.

The programme started in April 2014 when the library realized that the slum consist of more than 20 ethnic groups. The librarian got concerned after realizing that school children group themselves in their ethnic origins when they come to the library. Mostly, during the tablet lessons they didn't want to be mixed with others who were not from their ethnic origin. The KNLS Kibera Library uses the tablet and computers to educate the children and the youth on peace building cohesion and conflict resolution.

The library has wi-fi connectivity that helps the youth and children to search for information from various websites with the help of librarians. They also get in touch with various agencies that promote peace in Kenya. The youth get social media trainings and workshops which are organized for them on cohesion and peace building. The children trainings blends well with the school curriculum because they touches on basic units of social studies a subject which is examinable in Kenya certificate of primary education. The librarian conducts the trainings in collaboration with organizations such as Amani Kenya, Action for people in conflict and Africa peace initiative whose objective is to train people on peace building. The organizations also provide information materials. The tablets and computers are used to search for more information and show videos. Participants also acquire skills on ICT and civic education. The ICT skills help them to browse and search for answers to question online. The youth also learn to search for jobs

online, CV writing, networking among others. Among the ambassadors the library has assigned them different regions. Participants are able to access details on democracy, peace building, good governance and effects of lawlessness in the society. The youth are now proud of the trainings because the programme gives them a platform to share experiences, ideas and interact in open forums. They own the programme since it has shaped lives and enhance good relationships among the children, youth and community at large. The people's lives have changed because the library has transformed their way of thinking and they are living in harmony. They always come to the library to seek for information from the tablets and computers. The program has achieved its major goals of disseminating computer skills, utilizing e-resources to enhance peace, being innovative, able to interact with the tablets and creating awareness of KNLS Kibera library to the entire slum community. The success of the program serves as a model for implementation of e-resources in other libraries hence assist the children and the youth to concentrate, be motivated and enhance their social interaction and intellectual skills.

ii) Global Alliance for Africa Community Library

Global Alliance for Africa partners with local communities to design, build, and manage libraries that are in slums and remote rural areas throughout East Africa. The primary focus of Global

An Alliance library is to provide educational resources to orphans and other vulnerable children affected by HIV/AIDS as a foundation for them to rise out of poverty.

iii) Kibera Youth Community Programe

Kibera Youth Community programs (KYCP) have given young people a sense of social responsibility through community service and the creation of a theatre group and soccer. Its information services include, sensitizing Kibera's young people, and residents in general, to the dangers of drug abuse, illegal firearms, domestic violence, child abuse and HIV/AIDS scourge as well as development issues.

iv) Amref Youth Group

The group seeks to enlighten the community on health issues such as HIV/AIDS, TB, Safe Motherhood, Reproductive Health and Home Based Care

v) As-Swaffa Youth Welfare Organization

Its mission is to educate the youth about HIV/AIDS and drug abuse and they are passionate about promoting Nubian culture

vi) Bidii Youth Group

Its main aim is curbing criminal activities and cleaning up the environment.

vii) Kibera Santiago Resource Centre

Its vision is of a safe and conducive environment for the youth with reduced poverty and for the youth to be knowledgeable, both socially and spiritually. It is a self-help group and a resource ecentre .It empowers the youth to be responsible citizens. They have sports and arts for the street boys and street girls receive training in hairdressing.

viii) The Marcus Garvey Library

SHOFKO (Shining hope for the community) Marcus Garvey Library is a quiet safe haven for reading, learning and working .Located on the bottom floor of the Kibera community center, It houses 1000 titles and is open to the entire Kibera community.

The Marcus Garvey library is also home to children's story hour and Shofco's coveted adult literacy classes. Acquiring literacy skills goes a long way towards addressing inequalities, as adults learn not only to read and write but also to take control of their everyday lives through activities like banking, filling I forms, reading instructions and voting.

1.3 Challenges Facing Kibera Dwellers

In the informal settlement scheme in Nairobi all slums almost have the same challenges facing their dwellers, this include;

a) Water and Sanitation

Most Kibera residents have three main concerns with water: access, cost and quality. They complain about the limited access to water points, which are often located far from their houses, some landlords ration water such that it is only available on specific days of the week and at specific times. This is a limitation especially for people who have children and would require high amounts of water. However, for those who have access they decry the high cost of buying

water in the informal settlements. This is costly especially relative to the Kibera's residents' income levels. Some Kibera slums dwellers use sewerage water for bathing and washing. They also use borehole, rainwater, and sometimes draw water from broken pipes. This water is highly contaminated and filthy especially when plastic pipes burst and can potentially cause contagious diseases. The lack of improved sanitation facilities, including toilets, showers, and sewage disposal has been well documented in Kibera. Ninety four percent of the population in informal settlements does not have access to adequate sanitation.

b) Housing

There are more than 30,000 structures in Kibera slums which are mud walled and thatched with corrugated iron sheets. A household in the slums comprises of seven members on average and usually stands on a 12ft by 12ft structure costing between Ksh 750 to Ksh 1,000 per month. The local authorities usually issue temporary occupation licenses to the owners. Around 10% of Kibera residents own the structures and sub-let them to the remaining 90%. The structures are owned by informal owners who are recognized by the tenants, but they have no legal ownership. The tenants pay a monthly micro-lease to the owners.

Substandard and inadequate houses have been built in slums with temporary materials which are unsuitable for conditions such as straw roofs, mud, earthen floors and plaster.

c) Poverty

Poverty is a state of not having enough money to meet your basic needs such as water, food and shelter. Poverty is prevalent in Kenya. In 2003, 56 % of the population was below the poverty line, and it is expected to become 65.9% by 2015.

Almost three quarters of Kibera's households earn less than Kenya shillings 10,000 per month; with an average of five people per household, this translates to approximately one dollar per person per day (U.N. standard of poverty, 2011). Poverty in slums is more pronounced and has led to poor hygiene and sanitation, increase in diseases and infections, lack of proper nutrition, security and safety. The most significant general needs of every human being are housing, employment, food, toilet availability and water accessibility; unfortunately these are not available for Kibera slum dwellers due to poverty. Poverty in Kibera slums is evident through the structures of the houses the residents live in which are often constructed of cardboard, corrugated tins, mud, thatch and plastics. They are mostly single rooms which are about 4 metres by 4metres and are partitioned by only a curtain. This single room is used as a living room, kitchen, bathroom as well as a bedroom where both parents and children share. People living in poverty are the most overcrowded because of the cost of housing and the large family sizes. Lack of jobs is the main reason why poverty in Kibera slums is highly increasing. Men usually get part time jobs such as plumbing, building, cutting grass, carrying water, driving buses and cannot afford to fend for their families as well as taking their children to school and catering for medical fees. This lack of employment leads to insecurity in the slum, robbery and poor sanitation.

d) Health

The Ministry of Health (MOH) in Kenya is responsible for providing health care to the Kibera population. Kenyatta National Hospital, the biggest referral hospital in East and Central Africa, is close to the Kibera slums. Other health care facilities in the slum include: health clinics, dispensaries, maternity homes, nursing homes, medical centres, laboratories and radiological services, dental clinics which are owned by nongovernmental organisations and private individuals. In Kibera, pit latrines within 5metres to the house, pose bad odour due to poor construction, insufficient cleaning and ventilation. Poor toileting is the cause of all sanitation

and hygiene related diseases and infections. This is a result of blocked drainage because when water gets stagnant, mosquitoes bred there leading to spread of malaria and typhoid. Attempts have been made to improve the healthcare system in Kibera by the Kenyan government, non-governmental institutions and the private sector. Health care facilities are licensed by the Ministry of Health if they meet the requirements of the National Hospital Insurance Fund (NHIF). However, most of the private facilities operate illegally, thus leading to malpractice and poor quality of health. The demand for health care services is due to HIV/AIDS, malaria, tuberculosis, malnutrition, respiratory infections, cardiovascular diseases, prenatal diseases and accidents.

e) Prostitution

Prostitution is very common in Kibera slums and women are mostly the ones involved in this trade. Most women are forced to be prostitutes because of lack of employment and because they do not have any other means of earning a living to support both themselves

as well as their families. Children grow up experiencing this kind of behavior and are exposed to sexual behaviours at a very tender age. Due to being naive and lack of sufficient knowledge, a number of children especially the girls take up this behavior as soon as they turn teenagers.

f) Gender Inequality

Gender inequality is well defined as to women not having same rights, privileges and opportunities unlike men. In Kibera slums, gender inequality is more evident in the sense that women are more or less considered as housewives and anything involving money, property, decision making and many more is the responsibly of the men who in this case are always the heads of a household. Although many urban women enjoy equality in education and professional life, the majority women in Kibera slums are discriminated in this field mostly because the society is controlled on a patriarchal system. Women face male violence, which is usually domestic violence, and choose not to reveal this to anyone, because, in many cases no one will believe, and they are afraid that if their husbands hear they reported the matter, they may be chased away from their homes.

g) Education

Children in Kibera are faced with inadequate educational facilities and most schools start as day care centers that eventually continue to nurture the children. There are however charity foundations that have come up to ensure that the Kibera children also get a chance at formal education. The children of Kibera (CoKF) is among those foundations, The Children of Kibera Foundation (CoKF) is a tax- exempt charitable foundation providing

vital quality educational opportunities for orphans and vulnerable children living in the Kibera slums in Nairobi. Solutions to the challenges facing the Kibera slums are not easy. They believe that long-term sustainable change is possible through the care for and education of the children of Kibera. The foundation partners with individuals and organizations whose creativity, skills, generosity, and dedication make it possible for the children of Kibera to overcome the obstacles of poverty, disease, and social alienation and to realize their dreams as productive, healthy citizens. These educational centers mostly depend on donors for existence and to improve classrooms sanitation levels on site as well as provide books and basic teaching materials.

h) Drugs

Cheap drugs and glue sniffing are an increasing problem. Initially taken to alleviate boredom but then people find themselves hooked. Most of the youths due to unemployment and a lot of free time in their hands have resorted to taking of drugs such as marijuana and some even share injections due to lack of money to buy new syringes and this may lead to spread of diseases such as HIV/Aid

i) Unemployment

Kibera is near the industrial area of Nairobi where up to 50% of the available workforce are employed (usually in fairly unskilled jobs). However, there is still an unemployment rate of 50%. This is why the training and teaching of skills is very important. Unemployment is widespread and work is hard to come by. The majority of people who live in Kibera live from hand to mouth and starvation and famine are never far from the door. The average daily wage is less than £1 a day.

j) Leisure

Most young people in Kibera have nothing to do, obviously it is better for them to have the opportunity to take part in sport and several organizations are working on this. One such organization is Carolina For Kibera (CFK), named in TIMES Magazine and Gates Foundation “Hero of Global Health,” fights abject poverty and helps prevent violence through community-based development in the Kibera slum of Nairobi.

k) Information Poverty

Most of the slum dwellers are poor and hence chances of lacking information or information sources are very high. Concurrent with the available posters, pamphlets, and workshops offered to the population of Kibera, a concentration of minds and needs forms a complex network of information distribution. Neighbors talk to neighbors, and stomachs are agents in decisions. Days are filled with information exchanges, people are inundated with choice.

Access to information has often been synonymous with the ability to choose. It is true that lack of information does inhibit choice. Not knowing about rights, available services, plans for the area, or options for tackling certain problems exacerbate the vulnerability of the urban poor. But what happens when the information is conflicting or contains only partial facts? How does this inconsistent or incomplete information affect the ability to choose? Does information always lead to the ability to make good choices? In Kibera, over 500 organizations supporting income-generating activities, AIDS education, youth activities, health care, or microfinance are registered with the government while the population is underemployed and underserved. If the information and services exist, then

what are the additional barriers to change? Or, what are the weaknesses within these information sources and services that create barriers to change? In Kibera, myriad awareness campaigns and information strategies have been implemented. Awareness campaigns that distribute information mainly through posters or pamphlets have the advantage of reaching large numbers of people with few resources. However, awareness campaigns that are not followed-up by one-on-one conversations have proven largely ineffective at creating behavior change. Awareness campaigns also have taken the form of events like “World AIDS Day” that bring a 24-hour focus to an issue, but frequently do not have a real lasting influence on a community. More recently in Kibera, the behavior change strategy has been emphasized instead of or alongside awareness campaigns. This strategy marks successful information distribution with actual changes in behavior rather than sheer numbers reached with the information. The behavior change strategy often uses workshops or community organizations like youth groups to disseminate information. In these settings, one-on-one conversations and trust building between information distributor and receiver are possible. The behavior change strategy is ultimately focused on the individual and the individual’s behavior, thus it has the downside of altering one individual without altering a community. The individual must make difficult decisions that often run counter to a community’s expectations. Another recent method that has been emphasized in Kibera is the training of peer-educators. Many day or week long workshops have been sponsored in downtown Nairobi hotels to train peer-educators from Kibera. The strategy is to inform focal points within the community who already have the trust of that community and then rely on these focal points to disseminate the information. However, these attendees are often motivated to attend the

workshop by the food and glamour of the downtown location and frequently return to the community with little commitment to implementation. One factor that all these above mentioned strategies have in common is that the information is disseminated outside the community or by a force outside the community. The workshops happen at fancy Nairobi hotels in a suspended reality where decision-making is simplified and seems easier. Kibera is a guise of accessible information and services. Organizations in Kibera often are only superficially devoted to collaboration with one another as they frequently compete for the same funds. Thus, information is poorly organized and lacks coordinated distribution. In a population where the majority has not gone past primary school, inhabitants must discern between these pieces of information that are frequently conflicting or incomplete. In a population where the majority is living below the poverty line, inhabitants must weigh decisions against short-term survival. Some organizations such as Carolina for Kibera offer information to the youth and help them achieve their goals. Carolina For Kibera believes that the residents of Kibera are true development experts. Its ambitious young people have resounding hope and remarkable creativity. They have the talent and initiative to create real, sustainable change. Oftentimes all they need are the resources and some support network to help their ideas thrive.

1.4 Statement of the Problem

Community information service is a totality of information sources the community relies on and uses to access information and this sources may include people themselves, government, NGOs, libraries institutions and channels like radio, TV, newspapers and the nature of community information service is oriented to the characteristics of a particular

community. Information and resource centres in Kibera settlement scheme like any other information centre select, acquire, organize, store, disseminate and promote use of information to their users.

Information, if well articulated could eradicate ignorance and gives enlightenment on how to achieve economic, educational, social, political and cultural objectives towards the development of the entire community. Utilization of information in a coherent form can raise aspiration, through arousing people from fatalism, fear of change, desire for a better life and the determination to work for it. This signifies that no community can develop without knowledge, and a community can only become knowledgeable if they recognize and use information as their tool for development. Access to information in Kibera settlement scheme is affected by a number of drawbacks, evident in ways in which community information services are coordinated. It is agreed that information providers and experts need to pay attention to the information needs of the various groups and the communication process among each group of the user community. In this case, Libraries and information centres should develop their collections, facilities and services to meet the information needs of their patrons .In addition, to accomplish this task effectively, government and its agencies must have a careful and thorough understanding of the information needs, information-seeking behaviour, information services and information system of the slum dwellers Furthermore, Governments and their agencies must have effective implementation picture that will make the slum dwellers to maximise the utilization of information for their daily activities. It is therefore, desirable to understand the purpose for which information is required, the environment in which

the user operates, users skills in identifying the needed information, channels and sources preferred for acquiring information, and barriers to information seeking and use. Few studies if any exists on access and use of community information service by informal urban settlers in Kibera slums.

1.5 Aim of the Study

The aim of this study was to evaluate access and use of community information services by Kibera slum dwellers and to suggest the ways in which these services could be enhanced.

1.6 Objective of the Study

The specific objectives of the study were:

- i) To determine the information needs of slum dwellers in Kibera
- ii) To examine Information seeking habits of the slum dwellers in Kibera
- iii) To assess the existing information resources and services
- iv) To establish the extent to which information resources and services meet user needs
- v) To identify the format in which information is repackaged
- vi) To find out Challenges faced by accessing and using of information
- vii) To suggest how access of information services by slum dwellers can be enhanced

1.7 Research Questions

- i) What are the information needs of slum dwellers in Kibera?
- ii) How do the slum dwellers seek information?
- iii) What are the information resources and services available to the slum dwellers?
- iv) Do the available information services meet the dwellers needs?
- v) In what format is information services presented?
- vi) What problems do the slum dwellers experience in accessing and using information?
- vii) What strategies can be put in place to enhance provision of information services to Kibera slum dwellers

1.8 Assumptions of the Study

The study was premised on the following assumptions:

- i) Dwellers of informal urban settlement in Nairobi County are unable to enjoy the rights and privileges of accessing and using community information service.
- ii) Evaluating the current state of access and use of community information service by informal urban settlers will contribute towards enhancing the rights and privileges of these underprivileged populations in Nairobi County.

1.9 Significance of the Study

The significance of this study is in three fold, theoretical, practical and policy related

1.9.1 Theoretical Significance

The study constitutes a new addition to the existing body of knowledge on provision of information services to dwellers of informal urban settlements.

1.9.2 Practical Significance

Provides practical solutions to information planners on how to enhance provision of information services to dwellers of informal urban settlement.

1.9.3 Policy Related Significance

The finding and recommendation will inform policy formulation on planning and development of information services in informal urban settlement.

1.9.4 Scope of the Study

The study was carried out in Kibera settlement scheme. It focused on accessing and use of community information services by informal urban settlers.

1.9.5 Chapter Summary

Chapter one brought into perspective the background information of the study. It outlined the background information of Kibera slums, the statement of the problem, the aim, objectives, research questions, significance and scope of the study.

1.10 Definition of Operational Terms

Access to information: ability to get information or acquire right or permission to use information.

Community information service : Community information service is a totality of information sources the community relies on and uses to access information and this sources may include people themselves, government, NGOs, Libraries institutions and channels like radio, TV, newspapers

Information sources: includes journals, articles, reports, online resources both published and unpublished.

Information seeking: is the process or activity of attempting to obtain information in both human and technological contexts.

Information need: whenever a person has knowledge gaps that need to be filled.

Informal settlement: a residential formation built without legal permits to utilize the land or located outside of an urban development.

Livelihood: comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living means of support, occupation, and source of income, subsistence or work.

Poverty: condition of deprivation of the common necessities that determine the quality of life which includes food, water, clothing and shelter.

Kibera slum: a low income, informal settlement in southwest Nairobi Kenya with estimated population of one million which is characterized by a generally low standard of living..

Village elder: Person who either have a good level of knowledge in a particular aspect of community life and development, or have a range of links to people within the community or outside the community, or are particularly knowledgeable about community affairs.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review focuses on the theoretical framework of the study and other thematic issues already dealt with by other authors who have carried out related research. The study adopted Niedźwiedzka's Information Behaviour Model (2003) and Wilson information behavior model (1996). The thematic issues covered in this chapter include Information needs; Information seeking; Access and use of information and Community information services

2.2 Theoretical Framework

This study was guided by Niedźwiedzka's Information Behavior Model (2003) and Wilson information behavior model (1996) Barbara Niedźwiedzka is a medical librarian in Poland and was involved in a study of the Polish health care system in 1999. The health care system was characterized by large deficiencies of data and research evidence and a lack of organized systems for information provision. The same can be said of Kibera information resource centers which do not have adequately organized systems for information provision. In the Polish health care system then, professionals who seemed to need effective information systems were mostly policy makers and health care managers. So, a study was conducted to identify the information needs and behavior of this category of users.

The study's primary goal was to obtain preliminary data about current information needs, preferences and the limitations of health care managers as information users. This is quite

related to this research which also considered the information needs of Kibera slum dwellers. Niedźwiedzka's model presents a critical description of Wilson's (1996) Global Model of Information behaviour and proposes major modification on the basis of research into information behavior of managers. Wilson's model suggests that information-seeking behavior arises as a consequence of a need perceived by an information user, who, in order to satisfy that need, makes demands upon formal or informal information sources or services, which result in success or failure to find relevant information. If successful, the individual then makes use of the information found and may either fully or partially satisfy the perceived need - or, indeed, fail to satisfy the need and have to reiterate the search process. The model also shows that part of the information-seeking behavior may involve other people through information exchange and that information perceived as useful may be passed to other people, as well as being used (or instead of being used) by the person himself or herself.

However, Niedźwiedzka argues that Wilson's (1996) model, for example, cannot be used to describe managers' information behavior, since managers basically are not the end users of external information sources from an organization or computerized information services, and they acquire information mainly through various intermediaries. Therefore, the model cannot be considered as a general model, applicable to every category of information users. The proposed new model encompasses the main concepts of Wilson's (1996) model, such as:

- person-in-context,
- three categories of intervening variables (individual, social and environmental),

- activating mechanisms,
- cyclic character of information behaviors,
- the adoption of a multidisciplinary approach to explain them.

However, Niedźwiedzka model introduces several changes including;

- identification of 'context' with the intervening variables;
- immersion of the chain of information behavior in the 'context', to indicate that the context variables influence behavior at all stages of the process (identification of needs, looking for information, processing and using it);
- stress is put on the fact that the activating mechanisms also can occur at all stages of the information acquisition process;
- introduction of two basic strategies of looking for information: personally (independent user) and/or using various intermediaries (dependent user)

A fully independent user applies their own knowledge, available sources and interacts with search systems and information services (uses databases, catalogues, archives, search-engines etc.). Such a user also selects and processes the acquired information personally. More often people also use various intermediaries and their services (information specialists, subordinates, co-workers), and utilize the effects of their information seeking and processing (we might call this person a semi-independent user). A user can also almost entirely depend upon intermediaries, and he or she acts independently only at the stage of mental processing of information. Essentially it is an

intermediary who engages in systematic information activities: asking, seeking and searching, for this kind of user.

In light of Niedźwiedzka's research, it can be said that Kibera slum dwellers belong to the last category i.e. dependent users. They predominantly turn to the various intermediaries to obtain necessary information.

Niedźwiedzka argues that the closer the cooperation between a user and an information professional, the better results can be achieved in the effect of information seeking processes. Perhaps this justifies the need for a functional resource centres in Kibera informal settlement and suitably qualified information professional to provide the intermediary to improve information provision. Of course this will be enhanced by provision of appropriate ICT facilities. Such identification of the predominant behavior allows defining the range and type of problems, which are to be taken into consideration while outlining the area of necessary research, or designing certain information services. For instance, in regard to the categories of persons who are not the end-users of information systems some investigations, such as learning about their search skills, or about specific cognitive processes taking place in their interaction with computerized systems, are not so important. Much more important would be finding out about their social interactions or communication skills.

The results of Niedźwiedzka's research into managers' information behavior showed that Wilson's 1996 model is not suitable to describe this numerous category of information users, because it applies only to those who personally seek information, and this is not the

predominant behavior of managers. Since, most probably the managers are not the only group, which uses mediation of other people to such a big extent, it can be said that the model does not reflect the important information behavior of large groups of information users as may be found in a Kibera settlement scheme.

The reason why Niedzwiedzka (2003) new model was deemed suitable for the study is that the model can be used as a general model and can be applicable to all information users regardless of their professional background .It mentions the instances that give rise to information seeking behavior ,how information need arise and barriers that may exist in information seeking or in completing a search for information, therefore the model informs the study by identifying related concepts for example information needs ,information seeking ,information use which forms themes of the study under investigation and also recognizes barriers within the process of information search. Niedzwiedzka's emphasis on the use of intermediaries to improve information provision.

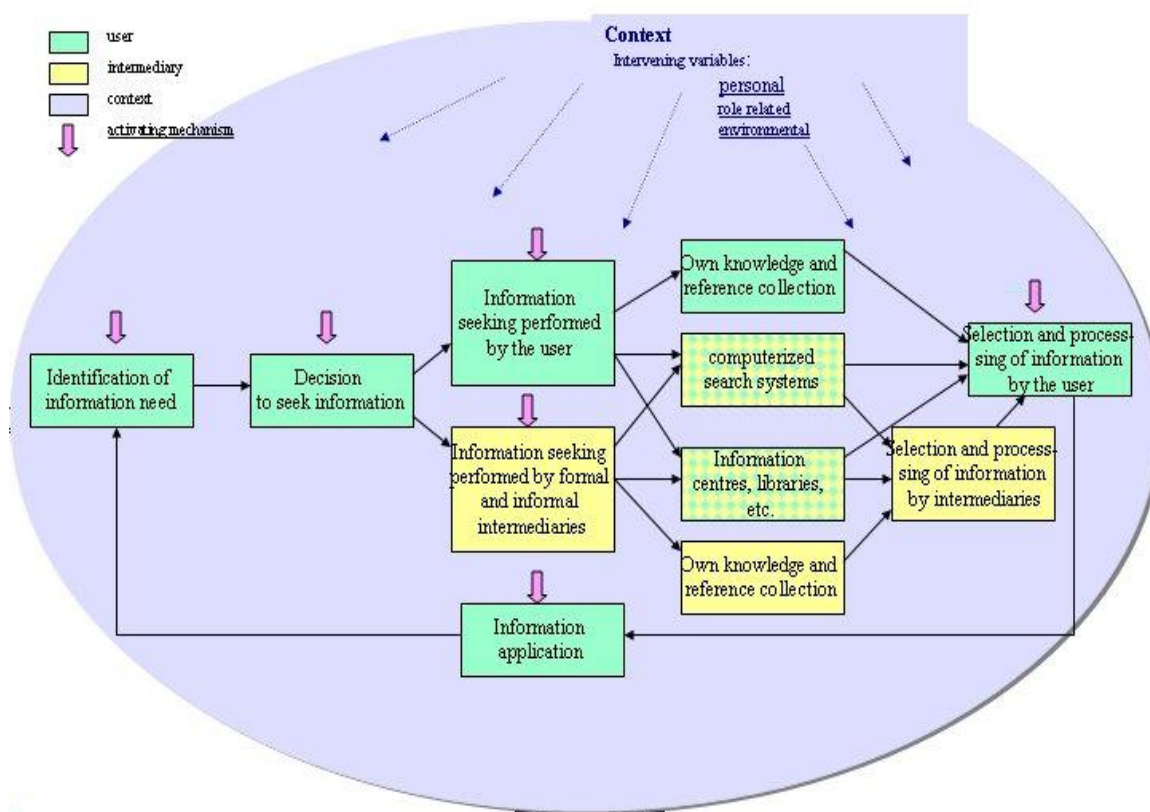


Figure 2.1.: A Model of Information Behavior by Niedzwiedzka (2003),

2.3 Review of Related Literature

2.3.1 Community Information Service

Ocholla (1993) while writing about library information services says that “an information service is a unit or system designed and organized to provide information to users. Such a system or unit can be organized within a library or any other information centre”.

While providing information, the providers should keep in mind that not all users need the same information. Shera (1972) categorizes information into the following six types:

- i) Conceptual information: The ideas, theories, hypotheses about the relationship which exists among the variables in the area of a problem;

- ii) Empirical information: Experience, the data of research, may be drawn from one's self or through communication from others. It may be laboratory generated or it may be a product of the 'literature search';
- iii) Procedural information: The methodology which enables the investigator to operate more effectively. Procedural information relates to the means by which the data of the investigation are obtained, manipulated and tested;
- iv) Stimulatory information: Man must be motivated and there are but two sources for such motivation, himself and his environment. Stimulatory information that is translated by direct communication – the contagious enthusiasm of another individual – but whether directly or indirectly communicated it is probably the most difficult of all forms of information to systematize. It is by nature fortuitous; it submits unwillingly to direction or compulsion;
- v) Policy information: This is the focus of the decision making process. Collective activity necessitates the definition of objective and purpose, the fixing of responsibility, the codification of rights and privileges, and the delineation of functions;
- vi) Directive information: Group activity cannot proceed effectively without coordination, and it is through directive information that this coordination is achieved.

The services that information personnel provide have changed over years. Loan of books and periodicals now form a minor part in information services. Speedy replies to quick reference enquiries, on line searching (internet), Selective Dissemination of Information (SDI) and Current Awareness Services (CAS) need to be provided by business and

industrial libraries. The availability of factual and numeric databanks should be made part of the service without which no business and industrial library could be termed as complete. The services offered must be in response to known needs and any activity which could be termed speculative need to be avoided. In considering information services in this context, emphasis is given to those services that have a direct bearing to dissemination of information because it is through dissemination of information that provision of information takes place. Ocholla (1993) argues that “an information service is not the same as information dissemination. Information service differs from information dissemination in that the latter is a mechanism, a vehicle of realizing or fulfilling an information service. Thus, dissemination arises from an existing service”. He goes on to say that information dissemination activity takes information to the user and ensures that the patron receives the most relevant, comprehensive, desirable and reliable information on a regular basis.

The act of taking information to the user by use ICT is the core of this study. The traditional methods of information provision can be improved greatly if they infuse the use of ICT. Based on the premise by Ocholla (1993) that dissemination arises from an existing service it is paramount at this point to highlight the information services commonly provided in organizations:

a) Current Awareness Services (CAS)

These are services designed to keep information users abreast with any current and relevant information needed for a variety of information demanding tasks they may be

involved with normally by alerting them whenever such information sources are received in an organization.

According to Kumar (1987), CAS means different things to different people. It means knowledge regarding recent developments relating to matters of special interest to an individual. It may be either information on new circumstances affecting what people do and how they may do it. Ojiambo and Ocholla (1993) define it as a system of reviewing newly available documents, selecting items relevant to the needs of an individual /group and recording them so that notifications may be sent to those individuals /groups to whose needs they are related.

Current awareness services have traditionally involved providing tables of contents (TOC) of new journals to users, often accompanied by news clippings and other relevant publications. It involves a review of "publications immediately upon receipt, selecting information pertinent to the program of the organization served, and individual items to be brought to the attention, by one means or another, of those persons to whose work they are related". As more and more information becomes available at an increasingly rapid pace, business libraries are expected to provide faster, electronic delivery of current awareness, as discussed by Nina Platt (2007) "business and industrial people want immediate access to news about clients, prospective clients, industries, legal topics and more." This presents librarians with opportunity to provide a current awareness service that will: decrease information overload, minimize risk, promote authoritative primary and secondary legal sources and provide a value added service to the organization.

b) Selective Dissemination of Information (SDI)

According to Kumar (1987), SDI is based on the concept of personal service. It is an information service directed towards individuals so as to cater for individual requirements. It is a refinement of the CAS idea. The author says that SDI is that service within an organization which concerns itself with channeling of new items of information from various sources to those points within the organization where they can usefully serve someone's interest. Reduced to its simplest form, it means seeing that the information is efficiently routed to the people who can most benefit from it. This means that the information officer must know the organization and the staffs very well, the goals, plans, and interests of key departments and people, and generally dedicate the information service to the working needs of the organization.

SDI entails matching information /documents with the profile (interest) of each individual of the clientele. The profile can be of a single user or group working on a same project or some limited subject field. Those information items which match are brought to the attention of the user. The aim is that a user should neither be provided too much information nor made to miss information essential towards their requirements. Too much information would make it difficult for the user to use information effectively.

SDI service on manual basis has been there in libraries for a long time. However in recent years, the trend is towards computer- based SDI. Manual SDI poses a number of challenges including:

- i) The volume and variety of literature being published in various fields especially in science and technology is enormous

- ii) The information professionals find it difficult to know all the interests of the users being served by them. Very often the interests keep on changing

Due to these problems, the matching of content of documents with the interest of users to be done manually became very difficult and thus Kumar (1987) suggested a machine system for handling a large scale work of matching. In recent years computers have been used to mechanize the matching procedures (user needs versus document contents). Thus for a successful business services, SDI should employ the use of ICTs.

c) Internet Services

The Internet has rapidly spread around the world in the past decade and has had an impact on the lives of millions of people. Over the past few decades a variety of new and exciting information services have appeared on the Internet, each with its own distinct characteristics. ICTs have revolutionized the whole world of information and have penetrated in areas beyond libraries transforming nearly every facet within society. Powerful PCs, sophisticated network technologies, affordable telephone lines have given a boost for Internet. Use of the Internet and other network resources is changing the traditional library functions. While in the 1980's and early 1990's the Internet's modality were changing traditional library functions and was used mainly for communications, database searching, and bibliographic access, today the Internet's modalities are changing or augmenting traditional functions of library services such as the information transfer process and the perceived nature of information itself.

d) Reference and Referral Services

Ocholla and Ojiambo, (1993) assert that, these are modern yet old services. They are modern because of computerization and also the increased demand of quick reference answers to queries. Today these services are more valued and both libraries and other information service points actively participate in their fulfillment.

Reference services are provided by libraries through use of their in-house information sources while referral services are provided by a library through linking with information sources from elsewhere. This can be done by use of telecommunication systems such as telephones, emails, normal postal services, interlibrary loans or interactive systems such as yahoo messenger and chats. Information seekers may usually require the address of a place, demand to know where a certain piece of information could be available e.g. titles of a document, names of the authors of a document whose topic he is searching on, abstracts on documents he/she is interested in, list of journal published in particular topic, or the date when an event took place, who was behind its success, why it happened, and how it happened. Libraries should develop an information service capacity capable of responding to such demands through use of their in-house information resources or by use of information linkages from elsewhere.

e) Abstracting Services

An abstract is a summary of intellectual content of a book. It is a brief summary of a research article, thesis, review, conference proceeding or any in-depth analysis of a particular subject or discipline, and is often used to help the reader quickly ascertain the

paper's purpose. When used, an abstract always appears at the beginning of a manuscript, acting as the point-of-entry for any given scientific paper or patent application.

f) Information Searching and Retrieval Services

New developments in ICT have led to increased use of online and offline information services. Ocholla (1993) states that, “online services operate more or less like a telephone system. A caller sends a message and expects a response immediately from the recipient”. Online information services are heavily dependent on the internet. The author says “an offline information service is non-interactive in so far as telephone or online systems operate. The most common type of offline system uses CD-ROM facilities for information retrieval”. It is worth noting that many publishers now have copies of their publications on CD therefore making access to the information more affordable.

Afolabi (1993) while writing about the roles of libraries and information centres says that “the information dissemination function involves several specific activities which include reference, circulation, bibliographic and current awareness services”. He says that the specific dissemination functions are outlined as follows;

- i) Establishing and maintaining a collection of reference books;
- ii) Providing answers to simple, factual reference questions;
- iii) Directing users who need research information to possible sources of information;
- iv) Publicizing new issues of periodicals either through the display of new issues or communicating directly with users;

- v) Routing information sources to users whose interests are known, particularly in research and special libraries;
- vi) Directing information seekers to relevant information in the library or obtaining such information from other libraries, using their knowledge of their collections;
- vii) Systematically gathering research information sources pertinent to a research query and conveying them to the person who needs it;
- viii) Compiling selective bibliographies based on the library's collection;
- ix) Conducting comprehensive literature searches based on users' requests;
- x) Listing current literature received including the copying of abstracts in abstracting journals and distributing them to users;
- xi) Locating, synthesizing, evaluating information and providing it in a written, summarized form;
- xii) Preparing abstracts of current literature received and distributing them;
- xiii) Translating articles written in other languages into languages understood by users;
- xiv) Providing current information relevant to users' interests on an individual or group basis for example SDI;
- xv) Providing editorial assistance for publications produced by the organization through education and training programmes;
- xvi) Identifying the resource persons who could be consulted in response to questions received from users, using previously acquired knowledge of the community.

Indeed the information dissemination activities outlined by Afolabi (1993) can still be catered for by providing the services earlier highlighted namely; CAS, SDI, reference and referral service, internet services and abstracting services. The authors only vary in the terminology used but all of them drive towards providing users with the right information. It is very likely the information dissemination activities can be enhanced if ICT is used.

Whichever way one looks at it, ICTs have basic advantages relating to speed, accuracy, capacity, versatility, cost and efficiency. For example Tanui (1993) argues that computerized information retrieval systems provide the following benefits. Information is: organized and retrieved faster than in manual systems; easily input and output; easily manipulated to suit different users' needs; stored in smaller room space; easily transported (exported and imported) from one place to another; and standardized for exchange.

g) Information Policies

McClure and Jaeger (2008) say that policy is “directives intended to shape decisions and actions of individuals, organizations, and government agencies.” Yet to Ohegbu (2008) it means simply “guidelines to regulate participation.” Rubin (2010) offers us a more general definition by stating that “policy” typically refers to political laws or regulations, yet can also mean a rule or practice followed more locally.

Where library and information issues are concerned, we would hope that a national policy would guide the development of both infrastructure – including for example telecommunications networks and computers and library buildings - and content

(everything from copyright agreements to actual documents). Hence, “library and information policy” could be defined as those laws, regulations and practices intended to facilitate the creation and dissemination of information throughout society. A fundamental aspect of this goal is creating channels for this to happen. Computer networks are one example of a channel, and libraries are another (Case 2012).

An interesting observation is made by the Canadian International Development Research Centre (IDRC) (2002) to the effect that there is a time element in policy, depending on the stage of development of a nation, and its current concerns. Policies change as political leaders come and go. The elements that are emphasized may change as a nation evolves. This is why those policy goals concerning “Human Resources” need special emphasis in industrialized countries; physical infrastructure tends to be emphasized in developing nations more than it does in developed parts of the world.

Case (2012) says that libraries and other information agencies must develop policies that allow them to reach the following goals:

- a) Foster literacy among the population. Both school and public libraries must teach and encourage reading. Where possible, they must also help citizens learn to use computers and to understand what information they find on the Internet.
- b) Support education. This takes place through the proper development of school and university libraries, and the networks and cooperative agreements that help them. Our national and institutional policies governing Internet services and

exchange of both electronic and physical materials are examples of these goals (e.g., Liu & Zhang, 2001).

- c) Recognize the importance of training new librarians to serve as intermediaries. That is, librarians to staff libraries and help the people they serve to find and understand information. Existing librarians may also need re-training. Policies offering financial support for university education are examples of such goals.
- d) Provide for public access to information. This is especially true for information produced by the government itself (Lor & van As, 2002). The US federal, local and state governments, for example, have “e-government” websites and services, through which information is not only disseminated, but citizens may conduct transactions, e.g., applying for a permits or jobs, or asking questions to government officials.
- e) Play a key role in preserving national culture (Vitiello, 2000). They do this most often by preserving the artifacts of culture: everything from ancient statues to books to sound recordings of music. In North America digital preservation of documents is being helped by a new law that will make it easier for libraries to make digital copies of so-called “orphan works,” in which the owner is difficult to identify, or which may have no owners.
- f) Finally, promote trust among societal members, and in this way create social capital. In recent years many economists and political scientists have rediscovered the importance of social networks and trust in providing a framework for a sound economy and society (Fukuyama,1995; Lin, 2002). If we do not trust others, we will not trade with them. Neither are we likely to help

them in times of natural disasters. This is one of the reasons that much attention has been paid to “the library as a place”; public libraries, in particular, want to be meeting places for their communities, so that people come to know each other as neighbors.

Various authors have highlighted some trends that will affect library- and information-related policies. Case (2012) is cautious about this and says that “Speculating on emerging events is a difficult and dangerous thing to do, because so often our predictions about the future turn out to be incorrect”. Nevertheless, the following are some changes that are happening worldwide, which influence policies relevant to libraries and information agencies.

Information technology: Although the effect is modest, it appears that information technology and telecommunications themselves influence policy-making (Shin, 2008). It does this by changing human communication patterns, allowing new influences on policy, especially in the form of spreading opinions and news. This in turn reflects things like the organization of workers and voters, affecting economic decisions and elections.

Information channels: Obviously the number of information channels have expanded with the development of computers and high-speed networks for data and voice transmission. They have also become more interactive, allowing for two-way communication, not just one-way, as with the older publishing and broadcasting industries. We see more and more examples of the Integration of media, e.g., mobile

phones that allow us to take and store and send photos, as well as voice and email, and to surf the Internet.

Highly educated workforce: It is perhaps a cliché that an educated workforce is key to taking advantage of the expanded channels of information. But the workforce must also be adaptable, willing to learn and change. This does not allow us to maintain our current habits in a global economy.

Digital divide: There has been much concern over so-called Digital Divides in national populations (Singh, 2002). This refers not just to physical access to computers and networks, but also to effective use of them to find information and communicate. Some groups, such as the poor, the less educated and those living on farms, differ from other segments of society in their access and use. These divides increase or decrease as new forms of IT diffuse throughout society. But gaps have not decreased very much among different income groups (Hundley, *et al.*, 2003).

Digital libraries: Digital libraries continue to evolve in useful ways. As they do they require more change in regulation and licensing agreements (Marcum & George, 2006). These also create complications with implications for libraries and for LIS schools: new librarians need to understand more about intellectual property and about licensing. They also need to be able to teach students about these things. We have not yet discovered a dominant business model for electronic publishing. Many different arrangements exist (NCLIS, 2008). As digital libraries evolve we may find that academic libraries become

major players, and perhaps even publishers, in scientific and scholarly communication (Mandel, 2006).

2.3.2 Information as a Resource

The key role played by information in decision making has elevated it to its new status as a strategic resource just like labour, land and capital. Our entrance into the information age has resulted into functions performed by workers becoming increasingly information oriented. We are now working in an information economy -- with information as the key resource. Information falls within the resource hierarchy which starts with data, which leads to information, coming together as knowledge, and resulting in wisdom.

Prasher (1986) says that “For socio-economic development, information is an indispensable resource. The supply of correct and precise information in time helps the policy-makers in making maximum use of the available resources as also in avoiding duplication of work. Similarly, a research and development programme can be accomplished successfully only if the required information becomes available as and when it is needed. Without proper and complete information no worthwhile decision can be taken. In fact, no progress is possible without the support of information”. The author goes on to say that since progress of every type is linked with the availability of the right information at the right time, access to it as also its dissemination is of vital importance. He concludes by asserting that “There should be a free flow of information. And, as far as possible, there should be no barriers restricting this free flow”.

Kumar (1989) concurs with Prasher (1986) by stating that “Information plays an important role in today’s complex economic, political and social environment. It has a crucial role in the advancement of knowledge (e.g. a researcher would need information to keep himself up to date and well informed in his field of specialization), decision making (eg a manager of a business firm should have enough information to be able to take a right decision), planning (e.g. the planners of national or regional or local plans need information to be able to plan properly), avoidance of duplication of efforts and technology transfer. Research aims to provide solutions to problems. However, solutions to problems require information.

Data can be defined as the undigested observations, or unvarnished facts. Information follows as the organized form of data. Knowledge is then the organized information which is internalized by its user and integrated with other bits and fields resulting from experience, study, or intuition . The final step is the integration of the knowledge into wisdom, which is information which has been made useful by theory relating the bits of knowledge to each other (<http://capita.wustl.edu>).

Similar to other resources, information must be produced, consciously used, and effectively deployed. It is important to be aware of the characteristics of our newest resource, so that we are able to use it efficiently, and benefit from it, as well as not abuse it. There are six inherent characteristics of information as a resource:

- i) Information is expandable: it is recognized that for specific purposes information may deplete, but in general, the more we have, the more we use,

and the more useful it becomes. Information is certainly not scarce, and is available in profusion. This concept of "information-rich" may not necessarily be good, but may instead mean being "swamped". There are limits to the growth of information, but they lie in the time and capacity of people.

- ii) Information is compressible: It is possible to concentrate, integrate, and summarize information for easier handling.
- iii) Information is substitutable: Information can and does replace land, labor, and capital. It is the use of computers and telecommunications that aids in this phenomenon.
- iv) Information is transportable: Information can be tapped into just about anywhere; this has led to the idea of being remote as much more difficult to achieve since people and information can be taken to the remotest of places.
- v) Information is diffusive: There tends to be an ability for information to leak. This leakage allows us to have more, and more of us to have it.
- vi) Information is shareable: No exchange transaction of information can take place, only sharing transactions, and this leads to an entire sharing environment. (<http://gunston.gmu.edu/>)

Organisations should give priority to information management and communication to benefit from it as a resource. However fears emerge when one considers the trend noted by Odini (1995) that “whenever economic pressures become intense, libraries and other information related services are normally the first types of services to be abolished or to have their budgets cut. This is especially true of government departments”. Whereas the

author did not mention ICTs directly, the current reality in government is that the budget for ICT had always suffered whenever the national treasury releases circulars for austerity measures. Sheila (2005) argues that many government ministries and organizations, especially small ones, get by without a resource centre and continue to survive or even to thrive nevertheless. Communities such as societies and other non-commercial bodies often appear unable to afford to establish a library or the post of a qualified information specialist or librarian.

2.3.3 Information Needs

At the root of information seeking is the concept of information need. On defining information need, Ojiambo (1993) says that a need is a value judgement that some group has a problem that can be solved.

The value in judgment exists due to differences in need requirement by individuals or group of people. One person may regard some information as vital while another will not see this as vital. The recognition of need is therefore one's judgment.

A need can only be discovered. Information is normally sought to meet a need. Need(s) are very significant messages within the human system. They are dynamic forces which create instability within the person and which lead to a cycle of behaviors that ultimately will correct this instability. According to Shailendra & Prakash (2007), a need is an abstract term. It refers to a lack of sufficiency on one's part. It indicates a gap in one's knowledge. This situation makes that person unsatisfied and requires something to come out of that situation. This leads to information seeking, which Brawden, (2007) defines as

the purposeful activities of looking for information to meet a need, solve a problem or increase understanding. Ansari (2008) notes that information need arises in the mind of any individual. It is a mental process, which occurs in the mind of the user, or he/she perceives in his mind to satisfy their needs. For information to be useful it should be current or up to date, complete and organized. According to Kadli & Kumbar (2011) the need for information is one of the cognitive needs of human kind. Information need causes information seeking behavior and these concepts complement one another.

Reneker (1992) notes that information need arises whenever individuals find themselves in a situation requiring knowledge to deal with the situation as they see it fit and that “information needs arise in all aspects of everyday life”.

Odini (1993) on specifying what an information need is says “an information need is a concept that is difficult to define, to isolate and especially to measure. This is because users do not specify what is needed under defined conditions. If users could specify what is needed under defined conditions, his or her problems might well be on the way towards solution.

Chaudhry and Saijadur (1993) observed that “a certain information needs is indeed a complex phenomenon. Even users themselves most of the time, have difficulty in clearly defining and expressing their information needs. It is therefore important that some rigorous data collection procedures are employed to study the information needs of any group.

Stillwell and Burton (2003), in “Knowledge, information and development: an African perspective” see the government policies and technology, especially communication policy as important in the provision of information to the needy. The people in the slum in Kenya are the neediest of modern technology and with information.

Life in informal settlement scheme areas is complex and the urban poor residents have a range of information needs. The specific needs vary from location to location and even within location a certain amount of investigation is generally required. Factors which contributes to variations in information needs includes e.g. politics and the local policy context; the age or degree of consolidation of a settlement; the size of settlements; urban-rural linkages; and target group characteristics.

Information needs are related to the problems and how they are understood, delimited and formulated. An identified problem creates the urge for one to seek information to solve the arising issues. The information provider can only provide information for an identified problem by the actual or potential user. An information need is a recognition that your knowledge is inadequate to satisfy a goal that you have.

Ingwersen (2005) defines information need as a significance of a consciously identified gap in the knowledge available to an actor. The need for information comes from a user who thereafter seeks to acquire the information from a source that they deem best. In the quest for information the user consults whatever sources that are available to meet the need.

Use of information is what drives all information behavior since it represents the ultimate purpose of which information is needed and sought. This forms the basis on which consideration of activities such as information seeking behavior of individual are made, no wonder the question how information will be used? Information need may lead to information seeking and formulation of a request of information (Wilson, 1996).

2.3.4 Information Seeking Behaviour

Information seeking behavior refers to the way people search for and utilize information. The work place in any sector of the economy is highly dependent on availability of good quality information. Wilson (2000) described information behavior as the totality of human behavior in relation to sources and channels of information, including both active and passive information-seeking, and information use. He described information seeking behaviour as “purposive seeking of information as a consequence of a need to satisfy some goal. Information seeking behaviour is the micro-level of behaviour employed by the searcher in interacting with information systems of all kinds, be it between the seeker and the system, or the pure method of creating and following up on a search”.

Information seeking behavior involves personal reasons for seeking information, the kinds of information which are being sought, and the ways and sources with which needed information is being sought (Leckie 1996). This definition ranks lower to that of Wilson by its use of the phrase “personal reasons”. In a work place like in a government ministry, the reasons for seeking information may not always be personal. Most of the time, information is sought because it is work related. However, the author makes very interesting conclusion about the information seeking behavior of engineers. He says that

the information seeking behavior of engineers is the result of a complex interplay of variables from job function, work environment, qualifications, discipline, career stage, accessibility of information, its ease of use and technical quality. These are useful parameters which can be applied even to this study.

Sadaf (2011) argues that there is a universal assumption that man was born innocent or ignorant and should actively seek knowledge. The author in his paper on 'Information Seeking Behaviour of B.Tech. and M.B.B.S. Students in Lucknow: A Comparative Study' quotes Marchionini, (1995) thus: "Information seeking is thus a natural and necessary mechanism of human existence". Information seeking behavior is the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems (such as a newspaper or a library), or with computer-based systems such as the Web.

Wilson (1997) makes it clearer by explaining that Information seeking behavior results from the recognition of some needs, perceived by the user, who as a consequence makes demands upon formal systems such as libraries, information centers, on-line services or some other person in order to satisfy the perceived need. In a government ministry, the need could be tasks assigned or envisioned new development which results in a knowledge gap that must be filled for proper discharge of duty.

Rouse (1994) argues that "in general, human information seeking is affected by such factors as payoffs and costs, resources available, expected value, update rates, amount of information available, diagnosticity of data, distributional characteristics of data and conflicts among sources. Information seekers will not go for high cost information

despite its high diagnosticity and tend to over and under-sample information sources. They select information sources that are highly related to the type of questions being asked so that the way the question is framed affects the choice of sources. Information needs vary in quality with the stage of problem solving. Problem solving proceeds as the rate at which information is sought decreases. People seek information to solve problems, to allocate resources and to make informed decisions. Information seeking is thus not an end in itself but a means to an end”.

i) Information Seeking Behaviour Models

Researchers have come up with a number of information seeking behavior models to explain this complex phenomenon. One of them is Marchionini (1989) who says that “Information-seeking is a special case of problem solving. It includes recognizing and interpreting the information problem, establishing a plan of search, conducting the search, evaluating the results, and if necessary, iterating through the process again”. Marchionini and White (2008) outline the core actions within general information seeking process as follows;

- a) Recognizing a need for information,
- b) Accepting the challenge to take action to fulfill the need,
- c) Formulating the problem,
- d) Expressing the information need in a search system,
- e) Examination of the results,
- f) Reformulation of the problem and its expression, and
- g) Use of the results.

The above is what is referred to as the standard model of information seeking.

Some researchers have examined how the information seeking process develops over extended periods of time giving rise to what is referred to as the information seeking in stages model. Kuhlthau (1991) conducted studies that showed that, for complex information seeking tasks, searchers go through different stages, both in terms of their knowledge of and their attitude towards the task. To develop her model of the information seeking process, Kuhlthau conducted numerous field studies as well as focused case studies. The final field study was very large (compared to most such studies), involving 385 academic, public and school library users at 21 sites. Participants were primarily students in high school or college whose task was to write a term paper or research paper. In these studies, the information seeking task took place over several months, and in most cases the students were assigned the topic rather than choosing it themselves.

Kuhlthau (1991) divides the process of information seeking into six stages:

- i) **Initiation:** The task is to recognize a need for information. Searches relate to general background knowledge. As the participant becomes aware of their lack of understanding, feelings of uncertainty and apprehension are common. Thoughts center on comprehending the task and relating the problem to prior experience.
- ii) **Selection:** The task is to select the general topic or the approach to pursue. Thoughts are general and undifferentiated, and center on requirements, time

constraints, and which topic or approach will yield the best outcome. Feelings of uncertainty often give way to optimism after the selection is made.

- iii) **Exploration:** The task is to investigate information on the general topic in order to extend understanding. At this stage, an inability to express what information is needed degrades the participant's ability to formulate queries and judge relevance of retrieval results. Information encountered at this stage often conflicts with pre-existing knowledge and information from different sources can seem contradictory and incompatible. This phase is characterized by feelings of confusion, uncertainty, and doubt, and participants may feel discouraged or inadequate, or may feel frustrated with the information access system itself.
- iv) **Formulation:** This phase marks the turning point in the process, in which a focused perspective on the topic emerges, resolving some of the conflicting information. Searches may be conducted to verify the working hypotheses. A change in feelings is experienced, with uncertainty reducing and confidence growing. Unfortunately, half of the study participants did not show evidence of successfully reaching a focused perspective at any time during their search process.
- v) **Collection:** At this stage the search system is most productively useful for the participant, since the task is to gather information related to a focused topic. Searches are used to find information to define, extend, and support the focus. Relevance judgments become more accurate and feelings of confidence continue to increase.

vi) **Presentation:** In this phase, the final searches are done; searches should be returning information that is either redundant with what has been seen before or of diminishing relevance. The participants commonly experience feelings of relief, and satisfaction if the search went well, or disappointment if not.

It is worth noting that these stages characterize changes in searches over time for a deep and complex information need, and are not necessarily representative for more light-weight tasks. Note also that these studies reflect the experiences of students doing required, challenging tasks; it is likely that the feelings of apprehension reported might not be observed in other information-intensive task environments.

Ellis (1989) proposes and elaborates a general model of information seeking behaviors based on studies of the information seeking patterns of social scientists, research physicists and chemists, and engineers and research scientists in an industrial firm. Ellis model of information seeking behavior describes six categories of information seeking activities as generic: starting, chaining, browsing, differentiating, monitoring, and extracting.

- a. **Starting:** Comprises those activities that form the initial search for information -- identifying sources of interest that could serve as starting points of the search. Identified sources often include familiar sources that have been used before as well as less familiar sources that are expected to provide relevant information. The likelihood of a source being selected depends on the perceived accessibility of the source, as well as the perceived quality of the

information from that source. Perceived accessibility, which is the amount of effort and time needed to make contact with and use a source, has been found to be a strong predictor of source use for many groups of information users. However, in situations when ambiguity is high and when information reliability is especially important, less accessible sources of perceived high quality may be consulted as well.

- b. **Chaining:** While searching the initial sources, these sources are likely to point to, suggest, or recommend additional sources or references. Following up on these new leads from an initial source is the activity of chaining. Chaining can be backward or forward. Backward chaining takes place when pointers or references from an initial source are followed, and is a well established routine of information seeking among scientists and researchers. In the reverse direction, forward chaining identifies and follows up on other sources that refer to an initial source or document. Although it can be an effective way of broadening a search, forward chaining is much less commonly used, probably because people are unaware of it or because the required bibliographical tools are unavailable.
- c. **Browsing:** Having located sources and documents, browsing is the activity of semi-directed search in areas of potential search. The individual often simplifies browsing by looking through tables of contents, lists of titles, subject headings, names of organizations or persons, abstracts and summaries, and so on. Browsing takes place in many situations in which related information has been grouped together according to subject affinity, as when

the user views displays at a conference or exhibition, or scans periodicals or books along the shelves of a bookshop or library.

- d. **Differentiating:** During differentiating, the individual filters and selects from among the sources scanned by noticing differences between the nature and quality of the information offered. For example, social scientists were found to prioritize sources and types of sources according to three main criteria: by substantive topic; by approach or perspective; and by level, quality, or type of treatment. The differentiation process is likely to depend on the individual's prior or initial experiences with the sources, word-of-mouth recommendations from personal contacts, or reviews in published sources. Ellis points out that for information to be relevant and consequential, it should address not only the subject matter of the problem but also the particular circumstances that affect the resolution of that problem. He identifies six categories of criteria by which individuals select and differentiate between sources: ease of use, noise reduction, quality, adaptability, time savings, and cost savings.
- e. **Monitoring** is the activity of keeping abreast of developments in an area by regularly following particular sources. The individual monitors by concentrating on a small number of what are perceived to be core sources. Core sources vary between professional groups, but usually include both key personal contacts and publications. For example, social scientists and physicists were found to track developments through core journals, online search updates, newspapers, conferences, magazines, books, catalogues, and so on (Ellis 1993).

- f. **Extracting** is the activity of systematically working through a particular source or sources in order to identify material of interest. As a form of retrospective searching, extracting may be achieved by directly consulting the source, or by indirectly looking through bibliographies, indexes, or online databases. Retrospective searching tends to be labor intensive, and is more likely when there is a need for comprehensive or historical information on a topic.

Although the Ellis model is based on studies of academics and researchers, the categories of information seeking behaviors may be applicable to other groups of users as well. In the diagrams for most of the models discussed so far, a sequential progression of information behaviour is depicted: the individual experiences an information need, goes out to seek information, finds it and thus solves the need. The simplicity of such a depiction is usually pointed out by authors. Wilson (1999) for example, says 'Feedback loops must exist within all models, since progression towards a goal is hardly ever unproblematic'. Dervin stated 'it is not intended to suggest that all situation-facing is linear or purposive' (Dervin 1992). Observation confirms that information seekers do not necessarily follow ideal, optimized routes. The authors argue that the order of information seeking tasks may be reversed or convoluted, and includes dead-ends, changes of direction, iteration, abandonment and beginning again.

ii) Barriers to Information Seeking and Provision

In Wilson's (Wilson, 1981) model, three sets of "barriers" to information-seeking behaviour were shown, which were related to the dimensions of the situation in which the person finds herself or himself

- a) Personal barriers;
- b) Social or role-related barriers
- c) Environmental barriers.

Various authors are of the opinion that search for and provision of information may be restricted because of several reasons, including:

- i) **Time.** Managers may not have the time to search comprehensively for the needed information. The more decisions managers have to make, the less time they have to investigate each decision. Cameron (1994) found information exchange between patients and doctors was inhibited by the lack of time available, the stress of the situation and the use of unfamiliar terminology. Hannay (1992) found that a typical consultation with a doctor lasted between 12 and 15 minutes, during which time any examination, diagnosis and explanation of treatment necessary had to be made, which left little or no time for the doctor to act as a source of other forms of health information.
- ii) **Decision making characteristics.** Rogers (1983) suggests that, "individuals generally tend to expose themselves to ideas that are in accordance with their interests, needs or existing attitudes. We consciously or unconsciously avoid messages that are in conflict with our predispositions". Employees often use less

than optimal decision making procedures. Instead of having a comprehensive list of alternatives they rely on a short list. Instead of postponing decisions until all information is collected, they decide as they go; often breaking the search process before necessary information is collected.

- iii) **Structural barriers.** Organizations restrict access to some information. Only specific groups within the organization have access to these information. This is often done for security purposes. Sometimes it is done to enable work units to focus their attention on single tasks and allow other units to address other tasks. Sometimes this is done in order to make some decisions more consistent with organization priorities. When organization decentralize decision making and remove structural barriers to information, workers have more latitude in decision making and may follow various decision making procedures. One purpose of restricting access to information is to make sure that the organization applies consistent criteria to similar decisions. In examining the behaviour of scientists in acquiring information relevant to research and development, Sheen (1992) notes that: "...some technologists effectively manage to draw a boundary round their expertise in order to protect their position and status within a firm: external information sources are utilized but then internalized and used to develop a personal power base".
- iv) **Cultural factors.** In innovation research, the "...established behavior patterns for the members of a social system" (Rogers, 1983) may also act as a barrier to change and, hence, as a barrier to information-seeking leading to change. Cultural factors draw the line between curiosity and intrusiveness. These factors

restrict information seeking by making some topics taboo or requiring the person to follow particular rituals for getting certain information. Both the society and the organization affect the culture and milieu in which employees seek information. Organization cultures that value formal communications that encourage group consensus and that enforce hierarchical ranks are more likely to restrict information search and innovation on the part of their employees.

- v) **Organization policies and rules.** Certain organization policies and rules may restrict information seeking behavior. For example, policies on privacy of employees restrict access to information on use of employee assistance programs.
- vi) **Individual impediments.** Employees may prefer to remain ignorant about some issues in order to not to have to choose sides on some issues. Employees may not have the cognitive ability to process large amount of information. Sorrentino (1990) suggest that: "...many people are simply not interested in finding out information about themselves or the world, do not conduct causal searches...and do not give a hoot for resolving discrepancies or inconsistencies about the self".
- vii) **Technical issues in search procedures.** Employees may not be aware of sources of information or procedures for access to these sources.
- viii) **Cost of search.** Both the dollar cost of search as well as the cost of thinking (tolerance of uncertainty until some future time) may restrict search for information. A fundamental requirement for information-seeking is that some source of information should be accessible. The lack of an easily accessible

source may inhibit information-seeking altogether, or may impose higher costs than the enquirer is prepared to pay.

It is important to keep cognisance of the barriers so that they can be overcome during information seeking and provision. Paisley(1969) on the other hand has identified a number of external and internal factors affecting the information seeking behaviour of a user: “The full array of information sources that are available; The uses to which information will be put; The background, motivation, professional orientation, and other individual characteristics of the user; The social, political, economic and other systems that powerfully affect the user and his work; and the consequences of information use – for example productivity”.

2.3.5 ICTs in Provision of Information

Information and communication technologies (ICTs) generally refer to an expanding assembly of technologies that are used to handle information and aid communication. These include hardware, software, media for collection, storage, processing, transmission and presentation of information in any format (i.e., voice, data, text and image), computers, the Internet, CD-ROMs, email, telephone, radio, television, video, digital cameras etc. The advent of personal computers, the Internet and mobile telephony during the last two decades has provided a much wider choice in collection, storage, processing, transmission and presentation of information in multiple formats to meet the diverse requirement and skills of people (Kwadwo, A. O. and Mekonnen, D. A. (2012).

Almost every single activity in the modern world is becoming more dependent on the application of ICTs for one use or another. Its use will be found in engineering, health

care, manufacturing etc and perhaps the most outstanding use is provision of information. Mechin (1997) argues that access to computers should be unlimited and total because information age workers need a computer and a phone and all information wants should be free. Computers give people a chance to develop their own ideas, to programme their own worlds and to distribute results of their work. He further says that the internet allows us to publish ideas very cheaply and even assume more responsibility for what we produce. It also provides more interactivity. The most commonly used ICTs for provision of information apart from computers include the following:

i) Phones

Phones are not new to the business world, but some of their features are. Besides making and receiving calls, employees can use their phones to check email, schedule appointments and chat with coworkers. Some devices even contain built-in cameras with videoconferencing applications, so employees may participate in virtual meetings when they are out of the office. They ensure that staff are always connected and in communication.

ii) Email

Email, or electronic mail, is an efficient and convenient way of communicating in the business world, and often replaces the need for face-to-face meetings. According to Business Link, email is a low-cost communication method that businesses use for marketing, mass mailings, instant communication and the exchange of electronic files, photos and videos. Another convenient aspect of email is that employees can send and receive email messages from their offices, homes and their phones. As long as they have

an Internet connection or wireless data plan, email can be accessed. Emails are ideal because attachments such as files and pictures can be sent along with the email. Organizations usually have an inside provider they use to setup email accounts for their employees, clients and other personnel.

iii) Fax Machines

Facsimile - fax for short - was more common before electronic mail came along. Distance is not an issue with fax machines. Employees can send faxes to coworkers in other departments or to people in other countries. Fax machines transmit images of documents that come in a read-only format; they cannot be edited or changed by the recipient. Faxes are frequently sent for legal documents that require physical signatures. A fax is sent over a telephone network. Information that is sent over a telephone network travels through the phone line and is picked up by the receiving fax machine. Fax machines can also be digital, meaning the transmission may be sent over a wireless connection and picked up by the recipient's fax machine.

iv) TV and Radio

In the early 1900s, researchers discovered how to use the radio waves that pervaded the planet. They eventually learned how to broadcast using these radio waves, so that audio could be delivered directly into people's homes. In the 1950s, television was invented, and in addition to audio broadcasts, people could now view actual visual broadcasts of people and places.

v) The Internet

The Internet arguably ranks among the greatest inventions ever made, as it has made communication relatively instant even for people on opposite sides of the planet, and has provided access to even remote parts of the earth.

vi) Video Conferencing

Video conferencing is ideal for business communication when different persons may need to be reached across the country or across different time zones. Video conferencing uses a camera, microphone monitor, loudspeakers and an Internet connection. This equipment allows you to see, listen and speak with one another; you can also communicate without leaving home offices.

vii) Telephone Conferencing

Telephone conferencing allows you to plug one party into another party. Organizations and businesses utilize telephone conferences when they have audio portions for participants to listen to. Phone conferences function as listen-only sessions or allow listeners to participate. Participants are connected into a telephone conference by being phoned; they also have the option of calling into the conference with a code or special number to bridge the call. At times, telephone and video conferencing may be combined when cameras and microphones are not available.

viii) Digital Networks

Modern telephone systems use digital networks that don't rely on physical line connectivity between two callers. Instead, they use fiber optics to carry and transmit the

digital connection, and can handle thousands of calls simultaneously. Along with this development, the Asymmetric Digital Subscriber Line (ADSL) network was established. ADSL provides faster Internet connectivity, and allows use of the phone and Internet at the same time.

ix) Packet Switch Network

The latest development in communication is a cheaper and faster network using packet switching. This is called Voice Over Internet Protocol (VOIP). Instead of cable or fiber optics, it uses "packets," or small bits of data transmitted on the Internet. Around the same time, Wireless Fidelity, or WiFi, networks were established. WiFi describes an Internet connection setup that allows handheld users to connect quickly using radio signals, and to move comfortably without using any cable wires. Wireless Application Protocol (WAP), likewise, is a current technology that enables access for handheld devices programmed with advance networking hardware and software.

x) Personal Digital Assistant

A personal digital assistant (PDA) is a handheld computer device designed for users who need small but flexible electronic utilities. It is often called a "personal diary" because it allows fast organization and manipulation of information for a reasonably limited storage size.

xi) Social Media

The Merriam-Webster online dictionary defines social media as “forms of electronic communication (as Web sites for social networking and micro blogging) through which users create online communities to share information, ideas, personal messages, and other content (as videos)”. According to Kietzmann (2011), social media refers to interaction among people in which they create, share, and/or exchange information and ideas in virtual communities and networks. He goes on to say social media depend on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content. They introduce substantial and pervasive changes to communication between organizations, communities, and individuals. “Social Media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content“(Kaplan 2010)

Government agencies regularly may rely on social media to engage with their customers for improved citizen services and cost savings. Social Media integrates technology, social interaction, and content creation to collaboratively connect online information. Through social media, people or groups can create, organize, edit, comment on, combine, and share content, in the process helping agencies better achieve their mission goals.

Various authors including Kietzmann (2011), Ahlqvist, (2008), Morgan (2012) and Eugene (2008) discuss the following most commonly-used types of social media in government:

xii) Blogs:

A blog is an easy-to-update website or webpage where authors write regular entries in a diary-like format. The most effective and interesting blogs allow readers to engage in conversations with the author and other readers. Blogs can provide great benefits, but they can require a large investment in time. A blog can help an agency to:

- a) Engage with and serve customers
- b) Put a human face on the work you do
- c) Explain the agency's mission, policies, and goals
- d) Promote discussion
- e) Spot trends early and head off potential problems
- f) Gather feedback and ideas

xiii) Social networks:

Social networking sites are platforms that connect people and allow them to engage. The most popular sites, such as Facebook and MySpace, also have groups and listing features, which allow targeted organization of dialogue and sharing. Members can share comments, links, photos, videos, and more. A professional networking site, LinkedIn, offers sections for jobs, recommendations, and questions. Social networking sites make it easy for members to connect with others who have similar interests or affiliations, and establish contact networks. Many tools such as photo-sharing (e.g., Instagram) or location-based services (e.g., Four Square) now incorporate social networking features. Social networking sites can help an agency promote government information and services. Many government agencies now use tools like Facebook to bring people

together around their agency's work and information. Social networks expand the government's outreach capabilities and improve our ability to interact with and serve the public.

xiv) Instagram: This is a free online photo-sharing, video-sharing, and social networking service that allows its users to take pictures and videos, apply digital filters to them, and share them on a variety of social networking services, such as Facebook, Twitter, Tumblr, and Flickr.

xv) Microblogs: As its name suggests, microblogging is writing extremely short blog posts, kind of like text messages. Twitter is currently the most popular microblog service and lets users post entries up to 140 characters long. Users can read these messages online or have them sent as a text message to a cell phone or other mobile device. The popular social networking websites Facebook, MySpace, and LinkedIn also have a microblogging feature, called "status update." The best use for microblogging is to engage a community in a public forum. Some sites even let you reply to posts, and automatically bring replies to your posts to your attention. For example, on Twitter, you can reply to a post by typing the @ symbol followed immediately by the user name, a space, and then the message.

xvi) Wikis: A wiki is a type of collaborative work space, it's a collection of Web pages that encourages users to contribute or modify the content. A simple Web interface can help a community collaboratively develop a document or web page, from anywhere. Wikis can be public facing, meaning that anyone can see the content, or only open to a

defined community within or across organizations. Wikipedia is one of the most well-known public wikis.

xvii) Podcasts: Podcasting is a way of publishing MP3 audio files on the Web so they can be downloaded onto computers or portable listening devices, such as iPods or other MP3 players. Podcasting allows users to subscribe to a feed of new audio files using "pod catching" software (a type of aggregator), which periodically checks for and downloads new audio files automatically. Any digital audio player or computer with audio-playing software can play podcasts. Users can also download podcasts to their desktop computer. The benefit of podcasts is that users can listen to them whenever they want.

xviii) RSS feeds: RSS stands for Really Simple Syndication (among other things). It is a Web content format which, when used with an RSS aggregator, can allow you to alert users to new or exciting content on your website. These news feeds enable users to avoid the conventional methods of browsing or searching for information on websites. Now the content they want is delivered directly to them. RSS feeds are commonly used on weblogs (blogs), news web sites and other places with frequently updated content. Once users subscribe to an RSS feed, they can gather material from Web sites of their choosing. It's a very convenient format because it allows users to view all the new content from multiple sources in one location on their desktop.

Social media are distinct from industrial or traditional media such as newspapers, television, and film as they are comparatively inexpensive and accessible. They enable anyone (even private individuals) to publish or access information. Industrial media generally require significant resources to publish information as in most cases the articles

goes through many revisions before being published. Morgan (2012) highlights some of the properties that help describe the differences between social and industrial media are:

- i) **Quality:** In industrial (traditional) publishing—mediated by a publisher—the typical range of quality is substantially narrower than in niche, unmediated markets. The main challenge posed by content in social media sites is the fact that the distribution of quality has high variance: from very high-quality items to low-quality, sometimes abusive content.
- ii) **Reach:** Both industrial and social media technologies provide scale and are capable of reaching a global audience. Industrial media, however, typically use a centralized framework for organization, production, and dissemination, whereas social media are by their very nature more decentralized, less hierarchical, and distinguished by multiple points of production and utility.
- iii) **Frequency:** The number of times an advertisement is displayed on social media platforms.
- iv) **Accessibility:** The means of production for industrial media are typically government and/or corporate (privately owned); social media tools are generally available to the public at little or no cost.
- v) **Usability:** Industrial media production typically requires specialized skills and training. Conversely, most social media production requires only modest reinterpretation of existing skills; in theory, anyone with access can operate the means of social media production.

- vi) Immediacy: The time lag between communications produced by industrial media can be long (days, weeks, or even months) compared to social media (which can be capable of virtually instantaneous responses).
- vii) Permanence: Industrial media, once created, cannot be altered (once a magazine article is printed and distributed, changes cannot be made to that same article) whereas social media can be altered almost instantaneously by comments or editing.

2.3.6 Use of Information

In the current information age, information is necessary and commands almost every aspect of our daily life, be it education, health, housing and even business enterprises. As a result it has become an important resource. In the knowledge based economy, it is being regarded as an asset. People use information to create knowledge, “but not just in the sense of data and facts but in the form of representations that provide meaning and context for purposive action” (Choo, 2002). Odi (1995) notes that information user community can be classified into groups: farmers and rural community, students, teachers and technicians, professionals in various field, policy makers, planners and administrators. He also identifies some of the factors that obstruct information use in Kenya as lack of suitable information systems, language barrier, illiteracy and lack of skills. Information use is one of three core elements of information behaviour, along with information needs and information seeking (Wilson, 1999). Information needs and information seeking have been well studied and characterized (e.g. Dervin, 1983; Ellis, 1993; and Marchionini, 1995). Information use, however, has received less attention in

the research literature. It is often linked to information need, in that information is needed so that it can be used. Another perspective to consider what happens with the information once it has been obtained, and how it is applied to accomplishing a specific task or goal. In the case of a goal-oriented information problem, it is essential to explicitly understand how information is used to address the problem. Information use is the final step in an information seeking process.

Choo (2002) views information use as “a dynamic, interactive social process of inquiry that may result in the making of meaning or the making of decisions.” The first type of use is intrinsic to the users involved with human understanding and integration with the user’s knowledge base.

This is a process of interpretation that may evolve into a process of inquiry and debate that ultimately results in knowledge creation. This type of information use has no visible indicators except in the depth and breadth of one’s personal knowledge base. The second form of information use concerns decision-making. While Choo (2002) discusses this form in the context of organizational decision-making, some aspects are equally applicable to individual decision making. Interestingly, his approach is also at a conceptual high-level matching of potential uses with stages of the decision-making process: identification, development, and selection. Information use is the factor that drives all other information behaviours, since it represents the ultimate purpose for which information is needed and sought. Without consideration of information use, consideration of activities such as information seeking or information retrieval is incomplete. It is the use of the information that informs and drives the information

seeking. It is not surprising that one of the common questions to arise during a reference interview is to ask how the information will be used, or for what purpose it is sought. In the same way that the answer can inform the subsequent reference interaction, understanding information use can also inform how an information system is designed and implemented.

2.3.7 Information Repackaging

Ikoja-Odongo and Ocholla (2004) on “information seeking behavior of the informal sector entrepreneurs: the Ugandan experience,” looks at the information needs of entrepreneurs especially the small and micro business enterprises. The authors are of the opinion that such information as banking, marketing training, record keeping needs to be repackaged.

Sturges (1996) in his article “Information repackaging in Malawi talks of “Information famine” of people starved of information mainly because of the cost associated with the books.

Rosenberg (1993) has reviewed the whole issue of information repackaging. She raises the need to identify and meet the information needs of rural population and provide alternative libraries as resource centers, classroom libraries and decentralized academic library services .She advocates the need to lobbying to decision makers about the importance and value of libraries ,resource sharing and introduction and use and information communication technology, training of librarians and local publishing. Munyua (2000) in “information communication technology for rural development and food security: Lessons from field experience in developing countries “cites lack of local

content and use of foreign language barrier. She finds that information available through ICTS is mostly in English, which the majority of developing countries especially people from informal settlement cannot read. She advocates use of video-based model, which can be translated into the language of the users. Munyua (1998) in an article FAO (1998:3) advocates the participation of the community in packaging information in the local language in relation to repackaging and local content development. The information would then be repackaged in media for examples CD-ROM to ensure access by communities later or elsewhere in the country. Community information service could be treated the same. Aboyade (1987) advocates a new direction in librarianship in her book, published in 1987. One of her recommendations was that information–services should repackage information into forms acceptable to the local population. Bredekamp (1996) notes that information centers and libraries were making notable advances in assessing, repackaging and providing information in the format that users can understand and utilize. In Kenya, there has been an effort by the government and non-government organization to repackage health information in various formats. Kaane (1997) has given information detailed analysis of methods used to disseminate health information which include Health talks, demonstration and discussion, films, video and tape recording, posters, flipcharts and flannel graphs, radio, drama stories and songs and puppets, rural newspaper, booklets and comics; the women groups and other agencies and the libraries. She feels that libraries must extend their services and take on the provision of community information services.

2.3.8 Information Sources

According to Chakraborty (1990) the range and variety of documents vary from printed publications to sophisticated imagery. They differ in physical forms and also in the nature of information content. All these documents are significant sources of information. Information can be found in several forms which are in general surveys, data, articles, books, references, search-engines and internal records of companies and organizations. Published sources are government statistics, technical manuals, directories, standards, financial documents, periodicals, and many more. The world is witnessing a shift from industrial economy to a knowledge economy, because of which knowledge resources are now as critical as any other economic resources. Chakraborty (1990) highlighted Ranganathan's views on categorizing sources of information as:

a) Primary Documents

According to Chakraborty (1990), these are documents carrying original or contributions. Original contributions are published in periodicals, conference proceedings, patents, theses, standards, specifications, trade literature and in the slum areas primary information sources is got from churches, NGO's CBO, government officers that is the chief officers, Dispensaries, schools

radio ,newspapers, people and televisions. Social networks are the foremost source of information of the slum dwellers to some extent, this is by default. Yet, it is also a recognition of the fact that the slum dwellers themselves are a source of knowledge.

The most important networks are based on kinship, proximity or friendship; more distant ones are based in the workplace or on association. Individuals who belong to several

such networks may be well informed, although there often also is evidence of the information circulating being incomplete, unreliable or otherwise of poor quality. The poor are not always able to check this, but even where they do, they sometimes tend to believe people they trust (close friend or relatives, religious leaders, teachers, etc.) rather than perhaps better informed contacts who are more distant to them.

b) Secondary Documents

Information carried in primary sources is later repackaged in indexing and abstracting periodicals, review articles, books, dictionaries and encyclopedias, as significant step in information communication.

c) Tertiary Documents

In some cases, information is processed at a further stage to produce documents like year books, bibliographies, directories, union catalogues and lists of research in progress. Many networks function on the basis of reciprocity, and those residents who have little to offer in return do risk rejection. Social exclusion is a real problem, also in terms of accessing information. Whilst the internal rules of the game of networking may stimulate exclusion, this can be made worse by external rules or circumstances, for example an increase in urban violence creating distrust and preventing people to meet. The development of community social capital can help to overcome this by generating conditions which make it easier for individuals to access information and for a community as a whole to develop its knowledge capital.

2.9 Chapter Summary

Literature was reviewed from primary, secondary, tertiary sources and print and non print format. The topic “access and use of community information services” is not short of literature. Many authors have written extensively about various aspects of community information service . Niedźwiedzka’s Information Behaviour Model and Wilson information behavior model (1996) have been discussed in the context of the research. A lot has been written on information as a resource, use of ICTs in provision of information, information seeking behaviour, barriers to information seeking and information repackaging.

However, not much has been written about provision of community information services for slum dwellers and the use of ICT in provision of information in the slum. This leaves a gap that can be filled through such research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter deals with the logistics of the research. It presents the research design, target population, sampling, data collection and analysis techniques. It also explains the pre-test of the focus- group discussion schedule and interview schedule as well as ethical considerations. The research was basically a case study drawing its population from Kibera informal settlement scheme.

3.2 Research Approach

The study adopted qualitative research approach. According to Creswell (2007) qualitative researchers tends to collect data in the field at the site where participants experience the issue or problem under study. This up-close information gathered by actually talking directly to people and seeing them behave and act within their context is a major characteristic of qualitative research. In the natural setting, the researchers have face-to-face interaction over time.

Qualitative research approach was deemed appropriate for the study because it encouraged greater interaction between the researcher and target community members and this elicited from the community in depth holistic information, skills, attitudes, values and knowledge. This enabled the researcher to describe the current status of community information services to Kibera slum dwellers.

3.3 Research Design

The study adopted survey research design

Kothari (2004) says that the objective of descriptive research is to answer the "who, what, when, where and how" of the subject under study. The author goes further to say that survey research design is a form of qualitative descriptive research which looks intensely at an individual or small participant pool, drawing conclusions only about that participant or group and only in that specific context. Survey research design was deemed appropriate because the data being gathered poses a better description of the relative characteristics of the general population involved in the study.

3.3 Study Population

Government statistics on the 2009 Kenya Population and Housing Census reported Kibera's population as 180,000 in nine villages namely Kianda, Kisumu ndogo, Siranga, Laini saba, Soweto East, Soweto west, Gatuikira, Mashimoni and Makina. These villages have similar demographic and economic characteristic and therefore the researcher opted to work with five villages because they are more accessible and secure as informed by the village elder and to avoid extra budget hiring extra security.

3.4 Population of Selected Villages

The target population of the study was 71,000 from the five Kibera slum villages. The population was segmented based on the villages as shown in table 3.1

Table 3.1: Target Population

No	Village	No of people	Percentage
1	Kianda	17356	24
2	Kisumu ndogo	16437	23
3	Siranga	15569	21
4	Laini Saba	11336	15
5	Soweto West	10350	14
	Total	71,000	100

The percentages in the last column depict number of people in every village as a proportion of the total number of every village.

3.5 Study Sample Size

The study sample size was determined using Krejcie and Morgan sampling table

Therefore for a population of 71,000 the sample size would be 382 according to the table. However, foreseeable constraints especially budget and to ensure practicality, the researcher was forced to use an inadequate population size of 60 being 52 respondents from the five villages. 10 respondent for each of the 5 villages of the population because the researcher is using focus group discussion as a data collection instrument and a focus group discussion is usually composed of 6-10 individuals who share certain

characteristics which are relevant to the study. The sample having been picked from all the villages was considered adequately representative. Five key informants were interviewed, as a result of their personal skills, or position within a society, they are able to provide more information and a deeper insight into what is going on around them". The main advantage of the key informant technique relates to the quality of data that can be obtained in a relatively short period of time. This technique is supported by Burgess (1989) who says that "most members of any community or society do not know the full repertory of forms, meanings and functions of their culture.

Table 3.2: Study Sample Size

Village	Sample size	Population	Male youth(19-27)	Female youth(19-27)	Female (30-45)	Male(30-45)
Kianda	11	17356	3	2	3	3
Kisumu Ndogo	10	16437	2	2	3	3
Siranga	10	15569	2	2	3	3
Laini saba	11	11336	2	3	3	3
SowetoWe st	10	10350	2	2	3	3
Total	52	71000				

3.6 Purposive Sampling

From a sample size of 52 respondents from the entire 5villages the researcher had to purposively sample the respondents for each of the 5villages. The researcher had to categorize the respondents into different age groups so that the researcher could obtain information on the participants belief and perspectives on access and use of community information services and the ways in which these services could be enhanced and the exercise of categorization by ages was done by the village elder. The group that was considered for this study included: male and female youths of ages between 19-27years, women of ages between 30-45and male of ages 30-45years.

3.7 Sampling Methods

Sampling is a process of selecting number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group. Non probability sampling method was used for this study. Non-probability sampling is a sampling method where the samples are gathered in a process that does not give all the individuals in the population equal chances of being selected.

3.8 Data Collection Methods

Data collection is the gathering of information to serve or to prove specific facts. In view of in-depth nature of this study; data was collected using interviews and focus group discussions.

3.8.1 Face to Face Interviews

According to Mugenda (1999) an interview is an oral administration of a questionnaire or an interview schedule. Personal or face- to -face interviews using a schedule were used to collect data in the study. This is because their information was in greater depth and the language of the interview was adapted to the ability or educational level of the person interviewed hence misinterpretation of the question was avoided. The key informants interviewed included village elder, chief, youth leader, NGO officer and CBO officer. The key informants were able to provide more information and a deeper insight in accessing and using community information services in Kibera slum. The information they provided was used to validate responses from other respondents.

3.8.2 Focus - Group Discussions

A focus group is usually composed of 6-10 individuals who share certain characteristic which are relevant for the study. The discussion is carefully planned and designed to obtain information on the participant beliefs and perception on a defined area of interest. The key advantage of conducting focus group discussion is that issues and patterns often emerge as a result of the interaction between participants that would not emerge in a series of individual interviews. The process of sharing and comparing provides the rare opportunity to collect direct evidence on how participants themselves understand the topic under discussion. The respondents involved in the focus group discussion included female and male youth of ages between 19-27 and female and male of ages between 30-

3.9 Data Collection Instruments

3.9.1 Interview Schedule

Data was collected using semi-structured interview schedules which were filled by the researcher. These are data collection techniques in which an interviewer physically meets the respondent, reads them the same set of questions in a predetermined order, and records his or her response to each. The Interview Schedule consisted of the following key themes information need, information seeking habits, sources of information, use of information and information repackaging

3.9.2 Focus - Group Discussion Schedule

The schedule was a list of questions that were directed to these groups. The benefits of focus group discussion is that the discussion was carefully planned and designed to obtain information on the participants belief and perspectives on access and use of community information services and the ways in which these services could be enhanced. The focus group discussion schedule consisted of the following themes: information need, information seeking habits, sources of information, use of information and information repackaging. The researcher involved a research assistant to help in observing and taking notes which were used for data presentation and analysis.

3.10 Validity and Reliability of Data Collection Instruments

Mugenda (1999) says that “validity is the accuracy and meaningfulness of inferences which are based on the research results”. It has to do with how accurately the data obtained in the study represents the variables of the study.

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials”. The author goes further to say that inconsistent data can arise from inaccurate coding, ambiguous instructions to the subjects, interviewer’s or interviewee’s fatigue and interviewer’s bias.

Kothari (2004) brings out the difference between the two concepts by stating that “reliable measuring instrument does contribute to validity, but a reliable instrument need not be a valid instrument”. After reviewing the interview schedule as highlighted above, the researcher was confident that it would yield valid and reliable data.

3.10.1 Pre-Testing Data Collection Instruments

Before collection of actual data, the interview schedules and focus group discussions were pre-tested using a checklist to determine the validity and reliability in relation to the following:

- i) Appropriateness of the vocabulary used for the different categories of respondents.
- ii) Clarity of the questions.
- iii) Sequence of questions.
- iv) If the Questions fully addressed the aim and objectives of the study.

To pretest the Validity and reliability of the data collection instruments a pilot study was conducted with a group of slum dwellers who did not take part in the actual data collection.

3.11 Ethical Consideration

The researcher conformed to the following ethical consideration

- i. Confidentiality: The researcher gave an assurance to the participant of the study that information that was provided in the course of the study would be treated as confidential and will not be used anywhere for any other reason
- ii. Data Integrity: The researcher maintained a high level of integrity by acknowledging all other people's works referred to in the course of research.

3.12 Chapter Summary

The chapter has presented the research design, target population, sampling and data collection techniques. It also explains data validity and reliability as well as ethical considerations. The research was basically a case study drawing its population from Kibera settlement scheme. The target population of the study was 71,000 comprising the Kibera slum dwellers from five villages Stratified random sampling was used to get a sample size of 52 from whom data was collected using focus group discussion method. In addition, key informants from Kibera slum department, were interviewed.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This study sought to investigate access and use of community information services to Kibera slum dwellers and to suggest ways in which these services could be enhanced. The data was analyzed qualitatively with the aid of descriptive statistics to compare relationships and make inference where it was felt that they could add value to the content ,percentage and tables have been used to present the finding

4.2. Information Needs of the Slum Dwellers

The study sought to establish the kind of information that slum dwellers require. From the findings presented in Table 4.1the interviewees said they need information about the neighborhood. This was further elaborated in the FGDs where majority said information needs in the neighborhood include problems of water supply, electricity supply, Environmental sanitation, refuse disposal, road maintenance and drought. A majority of the interviewees said that the slum dwellers needed information on health matters. From the FGDs the researcher established that health information included how individuals can prevent different diseases that affect them and awareness of available healthcare delivery and what it costs.

A 12% of the interviewees said that the slum dwellers required information on education. From the FGDs, the researcher found that education information needs included the existing public and private schools, needs of the illiterate's and semi-illiterates. They needed to have relevant information that will develop in their interest and support of

teaching and learning processes. A 6% said they required information on housing. In the FGDs, the discussant said they needed information about where they can obtain loans to build houses and the type of materials to be used and where they can be easily obtained. A 10% of the interviewees said the slum dwellers required employment information. The findings from FGDs revealed that they required information on employment opportunities on taxation, investment opportunities, banking and other financial activities. 8% said slum dwellers required information on transportation. In the FGDs the discussants said they needed information on the cost of bicycles, motorcycles and tuktuks and where to obtain them. They need information about road construction and maintenance. A 6% said they required religion, recreation and culture information. Further, 6% of the interviewees said they needed welfare and family matters information. In the FGDs a majority said they required it on problems of marriage, childcare and juvenile delinquency. 4% said they the required information on legal matters. In the FGDs the discussants said information is needed on laws that affect the slum dwellers. 2% of the interviewees said they required information on crime and safety. They further said this information was required on how to prevent crimes, report crimes and role of the law enforcement agents 8% said they needed information on policies and government. From the FGDs it was brought out that information was needed on political rights of the people and how they can exercise such right. 4% said they needed information on land information. In the FGDs they said they needed information on land tenure systems, acquisition and transfer of land

Table 4.1: Information Needs of the Slum Dwellers

Information	Frequency	Percentage (%)
The neighborhood information needs	3	7
Health information needs	9	20
Education information needs	6	13
Employment information	6	13
Transportation information need	4	9
Religion, Recreation and Culture information	3	7
Welfare and Family matters information is required	3	7
Legal matters information	2	4
Crime and Safety information is required	3	2
Policies and Government information is needed	8	18
Total	45	100

4.2.1 Information Sources for Slum Dwellers

The researcher sought to find out the kind of information sources that slum dwellers had.

The findings were summarized in Table 4.2. From the table, 22% of the interviewees said

word of mouth, 12% said schools, 8% said Public Barazas, 12% said Social Networks, 14 % said Mass Media, 6 % said Information Resource Centers, 8 % said Friends, 8 % said Medical facilities and 6 % said NGOs

Table 4.2: Source of Information for the Slum Dwellers

Information Source	Frequency	Percentage (%)
Word of mouth	11	21
Schools	6	12
Public Barazas	4	8
Social Networks	6	12
Mass Media	7	13
Information Resource Centre	6	12
Friends	4	8
Medical facilities	4	8
NGOs	4	8
Totals	52	100

4.2.2 If Information is able to meet the User Needs

The researcher sought to establish the extent to which information resources and services meet user needs. From the findings presented, a majority (71%) of the interviewees said the slum dwellers got sufficient information they required. 25% said they did not while

.Respondents reported that after consulting appropriate information sources they used the information for solving problems related to their health, business and marketing needs. Information seekers with unsatisfied information needs had to restart consulting appropriate information sources. Most respondents reported that when they failed to meet their information needs, it was due to high cost of newspapers and magazines, irrelevant content available through radio and television programs unsuitable information formats and high telephone call charges.

4.3. Information Seeking Habits of Kibera Slum Dwellers

The following section presents the findings related to information seeking habits among Kibera slum dwellers.

4.3.1 Method of Information Seeking

More than 40 (70%) of them consulted their colleagues either face to face, by telephone or through short messaging services (SMS), mass media, social networks and public barazas A small number that is 30 (33%) of the respondents sought for some of the information they required from information resource centre. The key informant said they sought information mostly from the internet which was readily available in the offices and assigning junior staffs to find the information and they concurred that the slum dwellers normal consult them.

4.4.2 Purpose of Seeking Information

Table 4.3: Purpose of Seeking Information

Purpose	Frequency	Percentage (%)
Updating knowledge	11	22
Solving problems	15	30
General Awareness	10	20
Preparing research	6	12
For entertainment	8	16
Total	50	100

22% of the respondents said the sole purpose of seeking information is to update their knowledge and general awareness 30% said they seek information to solve the problems and other seek information to prepare for research and for entertainment.

4.5 Sources of Information available in the Slum

The study sought to find out information sources that were available for the slum dwellers. The slum dwellers responses were limited to what information sources they made use of which included newspapers, the internet, public barazas, key informants, reports and surveys. From table 4.4, it can be seen that the most frequently used information sources were, key informants, public barazas books, newspapers, the internet in that order. The least frequently used information sources were surveys and opinion polls. This could be attributed to their rarity and specialized nature.

The key informants concurred with the researcher in terms of the information sources available but went further to mention other information sources including the following:

- i) Information can be found in several forms which included general surveys, data, articles, books, references, search-engines and internal records of companies and organizations. Government statistics, technical manuals, directories, standards, financial documents, periodicals
- ii) Maps, photographs, film objects and artifacts that reflect the time period in which they were created.
- iii) Records of organizations and government agencies
- iv) Original work of literature ,art and music

As to whether the available information sources were satisfactory to the information needs of the slum dwellers, the opinion was divided. Out of the 52 respondents, 35 (70%) of the respondents said the resources were satisfactory. The remaining 17 (30%) of the respondents said the resources were not satisfactory. Those who were not satisfied with the available information sources recommended additional resources to be acquired including:

- i) Books
- ii) Journals in different areas of specialization
- iii) Subscription to commercial database

Table 4.4: Information Sources available for the Slum Dwellers

Sources of information	Frequency	Percentage (%)
Newspapers	7	13
Internet	3	8
Public Barazas	12	23
Key informant	15	29
Reports	2	4
Surveys	2	4
Opinion polls	3	6
Books	8	15
Total	52	100

4.6 Use of Information

According to Choo (2002), people use information to create knowledge, “but not just in the sense of data and facts but in the form of representations that provide meaning and context for purposive action”.

4.6.1 Relevance of the Information provided in helping Slum Dwellers improve their Livelihood.

The researcher sought to find out the relevance of the information provided to the slum dwellers in helping them to improve their livelihoods. 21% said it will initiate financial literacy programs. From the FGDs, the discussants said that the financial literacy

programs would provide education on how slum dwellers can help themselves by creating and running successful legal micro/small businesses that will increase their income thus improving livelihoods and empowering slum dwellers with micro entrepreneurial skills with a view to establishing an Income Generating Activities (IGAs) thereby, making them becomes self-reliant.and community savings program where each member save at least Kshs 50 weekly to help build up loans or vocational training points.

A 26% of the interviewees said the information would initiate skills building programs. The FGDs added that skills building programs can impart skills like knitting, baking, hairdressing, briskets making, beads, mats from used straws, and earth interlocking blocks. A 24% of the interviewees said sponsoring children of slum dwellers to get education. The FGDs further added that education would leap frog the children and their families from poverty to better meaningful lives. Further, 27% of the interviewees said that the information would help in seeking volunteers that are willing to teach slum dwellers life skills they can use to live better happier lives. Promoting family values including gender empowerment through partnership with the other non-governmental organizations.

The key informants information will help the slum dwellers in teaching and promoting a good work ethics in Kibera through partnership with the non-governmental organizations and raising awareness on environmental concerns. So far, community information service has helped Kibera be involved in clean up and tree-planting.

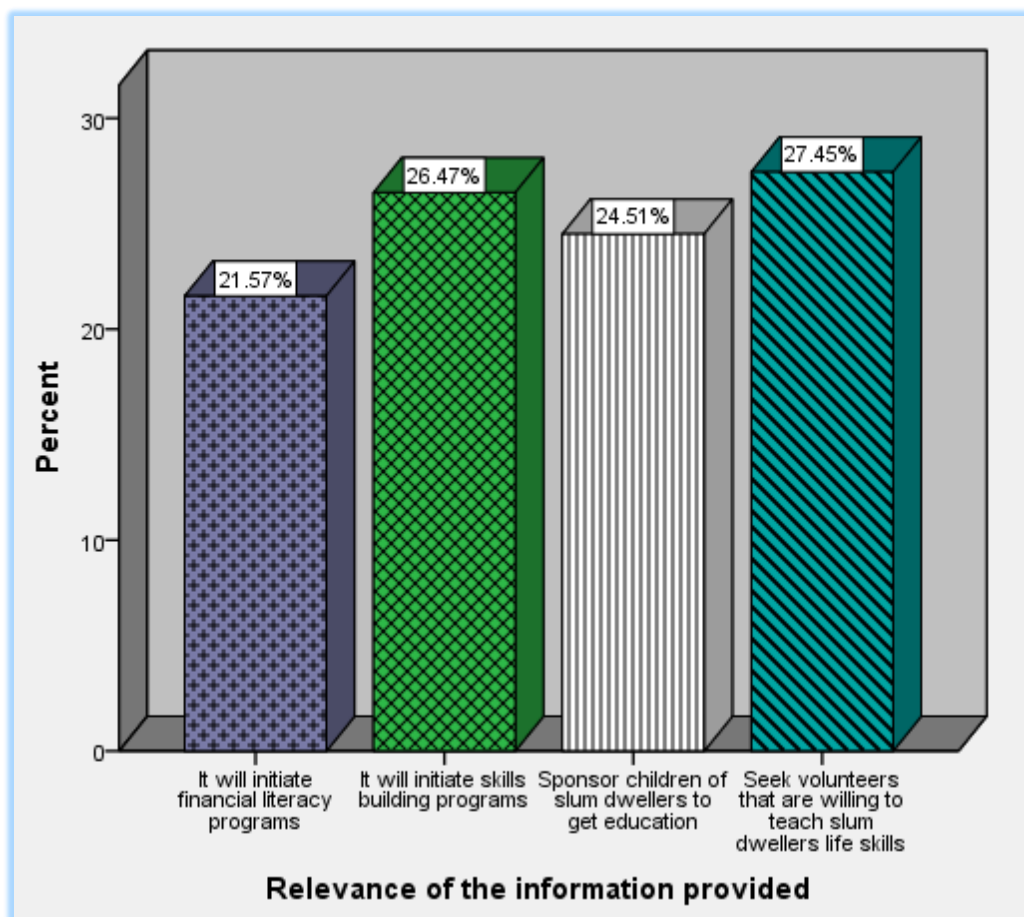


Figure 4.1: Relevance of Information provided to the Slum Dwellers

4.7 Information Repackaging

Repackaging of information refers to the presentation of information in more understandable, readable, acceptable and usable forms. Customization of information taking in to account the needs and characteristics of the individual or user groups and matching them with the information to be provided so that diffusion of information occurs.

4.7.1 Formats of Information that the Slum Dwellers receive

37% said they were provided with information through brochures, health talks, flipcharts, fliers, newsletters and booklets while 18% said they got it in compact disks.

4.8 Challenges and Suggestions

4.8.1 Challenges Faced by Slum Dwellers when Accessing Information

The researcher sought to establish the challenges faced by slum dwellers when accessing information. The findings were summarized in Table 4.4. From the table, 70% of the respondents said people were starved of information mainly because of the cost associated with information materials which was the major challenge they faced, poor marketing of information, Poor knowledge of existing information resources by the users, Information access brought by information communication technology. 15% said lack of internet access, lack of enough time to visit information centres and information centres are far located.

Table 4.5: Challenges Faced by Slum Dwellers when Accessing Information

Challenges	Frequency	Percentage (%)
High cost of information materials	10	24
Poor knowledge of existing information resources	6	14
Poor marketing of information	7	17
Lack of internet access	4	10
Distance	6	14
Language barrier	3	7
Inadequate and outdated information sources	5	12
Total	42	100

4.9. Proposed Strategies to Improve Access of Information Services

The study sought to find out from the respondents their proposed strategies to improve information provision. Some of the proposed strategies are as follows:

4.9.1. Government should Support Slum Dwellers to build their Information Capital

It is equally important to empower communities and their organizations, e.g. through promoting dialogue, training of key individuals and leaders, improving literacy and communication skills, Where possible, projects should include the upgrading or establishment of community meeting places, where residents can chat and share information. These could eventually become community resource centres, libraries, training centres, telecentres,

4.9.2 Information Communication Technology

The respondents suggested that the computer lessons be introduced in every information centres, though Kenya national library service Kibera branch has computer lessons and internet access at a fee most people cannot afford that. They also suggested that free Internet facilities be installed and accessed at minimal or no cost. The respondents prefer to be equipped with few computers equipped with assertive technology which they can share rather than several computers not equipped with the technology.

4.9.3 Government needs to rethink their Dissemination Strategies

The informal urban settlers should have equal access to information. Slum dwellers are an important source of indigenous knowledge, which they share through their networks and which is essential to achieve urban development but remains a source that is not

optimally exploited by external agencies that are often too inclined to introduce exogenous knowledge.

4.10 Benefits to the Slum Dwellers if Information Services is readily Accessible

Additionally, the study sought to find out the benefits the slum dwellers would have if the information services were readily accessible. From the responses, the researcher established that; It will increase profitable market access and production efficiency to the slum dwellers, Increase the political empowerment and social inclusion of the urban poor dwellers, make the best out of their situation, Learn skills of their interest available where they are and start making a product they can sell to make money, be on the lookout and enroll for any life improvement useful programs that come by, seek employment for the purpose of saving money to start own small business, and make choice to do whatever it takes to leave slum life for a better more fulfilling life

4.11 Chapter Summary

The chapter makes a presentation, analysis and interpretation of the data under various headings derived from the focus group discussion schedules.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the major findings, conclusion and outlines the recommendations.

The study concluded that community information service is fairly accessed and used.

5.2 Summary of Findings

The research sought to find answers to the following questions.

- i) What are the information needs of slum dwellers in Kibera?
- ii) How do the slum dwellers seek information?
- iii) What are the information resources and services available to the slum dwellers?
- iv) Do the available information services meet the dwellers needs?
- v) In what format is information services presented?
- vi) What problems do the slum dwellers experience in accessing and using information?
- vii) What strategies can be put in place to enhance provision of information services to Kibera slum dwellers

5.2.1 Information needs of the Slum Dwellers

- a) The researcher established that the slum dwellers mostly required information such; information about the neighborhood in terms of problems of water

supply, electricity supply, Environmental sanitation, refuse disposal, road maintenance and drought;

- b) Information on health matters including how individuals can prevent different diseases that affect them and awareness of available healthcare delivery and what it costs.
- c) Information on education such as the existing public and private schools needs of the illiterate's and semi-illiterates. They needed to have relevant information that will develop in their interest and support of teaching and learning processes
- d) On housing, about where they can obtain loans to build houses and the type of materials to be used and where they can be easily obtained
- e) Information on employment such as employment opportunities, on taxation, investment opportunities, banking and other financial activities
- f) Information on transportation such as the cost of bicycles, motorcycles and tuktuks and where to obtain them.
- g) They need information on religion, recreation and culture information for instance religious, recreations and Cultural activities. In addition, the slum dwellers required information; on welfare and family matters, legal matters, crime and safety, policies and government, and land for example, information on land tenure systems, acquisition and transfer of land etc.

5.2.2 Sources of Information

- i) The study sought to establish sources of information that the slum dwellers had. The findings revealed that the slum dwellers got their source of information from newspapers, magazines, Word of mouth Schools Public Barazas Social Networks Mass Media, Friends, Medical facilities Medical facilities
- ii) Records of organizations and government agencies; Original works of literature, art or music; Map, photographs and films; Objects and artifacts that reflect the time period in which they were created

5.2.3 Use of Information

The third objective of the study was to find out how the slum dwellers use information that they acquire. Initiating financial literacy programs that would provide education on how slum dwellers can help themselves by creating and running successful legal micro/small businesses that will increase their income thus improving livelihoods. Initiate skills building programs that can impart skills like knitting, baking, hairdressing, briskets making, beads, mats from used straws, and earth interlocking blocks. Sponsoring children of slum dwellers to get education that would in turn leap frog them and their families from poverty to better meaningful lives and help in seeking volunteers that are willing to teach slum dwellers life skills they can use to live better happier lives.

5.2.4 Information Repackaging

- The research sought to establish ways in which information was repackaged for the slum dwellers. The information was provided to the slum dwellers through brochures, in compact disks, through fliers, newsletters and booklets.

5.2.5 Challenges Faced by Slum Dwellers when accessing Information

The researcher sought to find the challenges faced by slum dwellers when accessing information. Slum dwellers were faced with the challenge of high cost of information materials

- i) Lack of awareness
- ii) Language barrier
- iii) Lack of internet access
- iv) Distance
- v) Lack of enough time to visit the community information centres. The problem could be closely linked to the busy schedules of the community members since the members are involved in various activities that can generate money so that they are able to feed for their families.

5.3 Conclusion

In view of the foregoing findings, the study generally concluded that there was no optimum utilization of community information services in Kibera settlement scheme because they lack enough time to visit information centres, Information sources are so far located, others do not know how to use library catalogue. However, there was still need for innovative use of the facilities to enhance provision of information. This is supported

by Kwadwo and Mekonnen (2012) who say that “the advent of personal computers, the internet and mobile telephony during the last two decades has provided a much wider choice in collection, storage, processing, transmission and presentation of information in multiple formats to meet the diverse requirement and skills of people”. The information needs of the slum dwellers have not been adequately met they largely have to rely on their own social networks and key informants within their communities, or sometimes outside, for support in developing their livelihoods and coping with. There was therefore need to devise ways of filling the information gap. Indeed this is in agreement with Odini (1993) who says that “No information service which aims to provide an effective service can afford to neglect research into the needs of its potential users. The purpose of the information needs analysis is to establish the main areas in which information will be sought and to set up an appropriate collection of resources to satisfy those needs”.

It is gratifying to note that the challenges mentioned by Kibera slum dwellers are not of the magnitude to stop accessing information but it is the role of the government and non-governmental organization to ensure access to information to all. Just like other community-based information, multimedia and learning centres, the information and technology centres that work most effectively are those where there is a union of three things: charismatic leadership by one or more individuals, strong support from the community and adequate finance, which is usually provided from outside the community. The centres are however fragile. Few last for more than ten years. The charismatic leader often becomes worn out, the priorities of the community change or, most common, the source of external finance dries up. Nonetheless, when they are operating effectively, the centres make a valued contribution to the economic, social and cultural life of the

communities that they serve. The value of that contribution will undoubtedly increase as the transition to information-based societies becomes more entrenched. The challenge for the future is to persuade local, regional and national governmental bodies to accept a responsibility to fund the services. They have to recognize that providing communities with an acceptable level of access to information and ICT is as important as providing them with access to schools, clinics, the road network and the transport system. Importantly too, they have to back that recognition with a commitment to fund the services.

5.4 Recommendation

- i) The Kenya National Library service Kibera branch and other resource centres within Kibera should carry out information needs assessment with the help of the information officers -re-examine the existing information sources and system and decide whether it is necessary to redesign and adjust them to correspond to information needs of the slum dwellers then they market the library services, improve internet connectivity and repackage information in relation to the information needs of the slum dwellers.
- ii) The information officers within Kibera should be more innovative and think of ways to encourage slum dwellers access information for example the use of mobile libraries ,kindles or other appropriate devices to different villages and this could be part of the library's regular outreach service.

5.5 Recommendations for Further Research

Although this study has covered several issues, there still remains certain area which needs further investigations. This includes;

Information security; the study revealed information and resource centres within Kibera did not have any policy regarding the security of information. This being the case, there is need for further studies on information security to be carried out to find out the current status of the information centres in relation to the security of information.

The study was only confined to the Kibera informal settlement, therefore, similar study be conducted in other informal settlement in Nairobi County.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER

Audrey Kemunto Bandari,
P.O Box 63050-00200,
NAIROBI.

Dear Sir/Madam,

Re: Data Collection for Academic Research

I am a postgraduate student at Moi University and undertaking a thesis research for a graduate degree course in the school of Information Science. I will be conducting a research on the Evaluating access and use of community information service by informal urban settlers in Nairobi County: The case of Kibera slums .The aim of the study is to investigate the current status of community information services to Kibera slum dwellers and to suggest the ways in which these services can be enhanced. I would be grateful if I could be allowed to carry out interviews to the key informants, focus group discussions to the members of this community. If the study is successful, the results may be published in the appropriate journal, otherwise I will be willing to send to the institution the executive summary of my research when it is completed.

Thank you in advance for your cooperation

Yours Faithfully

Audrey K. Bandari

APPENDIX II: INTERVIEW SCHEDULE FOR KEY INFORMANTS**1) Information need**

What is your position in the society?

What are the daily activities of the slum dwellers?

Do they need information to undertake the above activities?

What information do the slum dwellers require?

Where do they get information from?

Do you think they get sufficient information they require?

2) Sources of information

What sources of information are available in the slum?

What information resources do the slum dwellers have access to?

How relevant is the information provided help them to improve their livelihood?

3) Information seeking behavior

How do they seek information that they require?

Whenever they are provided with information and they are not satisfied, what do they normally do?

4) Information repackaging

What are the formats of information provided to the slum dwellers?

5) Challenges and suggestions of access and use of information

What challenges do the slum dwellers face when accessing information?

What solution would you propose to overcome these?

How beneficial would information services be to the slum dwellers if it readily accessible?

APPENDIX III: FOCUS-GROUP DISCUSSIONS SCHEDULE

1) Information need

What information do you require?

What are your daily activities?

Do you need information to undertake the above activities?

Where do you get information from?

Do you think you get sufficient information you require?

2) Information seeking habits

How do you seek information that you require?

How do you typically locate resources?

Where do you access information from?

Where do you seek information from?

3) Sources of information

Which is your main source of information?

What sources of information are available to you?

What information resources do you have access to?

4) Use of information

How relevant/beneficial is the information provided help you to improve your livelihood?

Does the information always lead to the ability to make good choices in life?

What happens when the information is conflicting or contains only partial facts?

4) Information repackaging

In what format would you desire the information services be presented to you?

What are the formats of information provided to you?

5) Challenges and suggestions of access and use of information

What challenges do you face when accessing information?

Have the challenges affected your livelihood?

What solution would you propose to overcome these?

How beneficial would information services be to if it readily accessible?

Community information services available in Kibera include

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APPENDIX IV: KREJCIE AND MORGAN SAMPLING TABLE

Table for Determining Minimum returned Sample Size for a given Population Size for Continuous and Categorical Data.

Table 3.1									
<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

APPENDIX V: RESEARCH AUTHORIZATION LETTER

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegram: "SCIENCETECH", Nairobi
 Telephone: 254-020-241349, 2213102
 254-020-310571, 2213123.
 Fax: 254-020-2718215, 318245, 310249
 When replying please quote

P.O. Box 30623-00100
 NAIROBI-KENYA
 Website: www.ncst.go.ke

Our Ref:

Date:

NCST/RCD/13/013/95

3rd September, 2013

Audrey Kemunto Bandari
 Moi University
 P.O.Box 3900-30100
 Eldoret.

RE: RESEARCH AUTHORIZATION

Following your application dated 8th August, 2013 for authority to carry out research on "*Provision and use of community information services in informal urban settlement schemes in Nairobi: The case Kibera Slums,*" I am pleased to inform you that you have been authorized to undertake research in Nairobi County for a period ending 31st December, 2013.

You are advised to report to the County Commissioner and the County Director of Education, Nairobi County before embarking on the research project.

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

DR. M. K. RUGGITT, PhD, FSC.
 DEPUTY COMMISSION SECRETARY
 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Copy to:

The County Commissioner
 The County Director of Education
 Nairobi County.